ENVIRONMENTAL COMPLIANCE ASSESSMENT OF

EDWARD MACDOWELL LAKE PETERBOROUGH, NEW HAMPSHIRE

PRELIMINARY FINDINGS REPORT

U.S.Army Corps of Engineers
New England Division
424 Trapelo Road
Waltham, Massachusetts
02254-9149

January 1994

US Army Corps
of Engineers
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For Inter Corps Office Distribution Only

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CENED-OD-P 1 February 1994

MEMORANDUM THRU Chief, NRM Branch

THRU Act. Chief, PORD

FOR Director of Operations

SUBJECT: Environmental Compliance Assessment of Edward MacDowell Lake

1. Attached please find the Preliminary Findings Report for the Environmental Compliance Assessment conducted at Edward MacDowell Lake utilizing the Environmental Review Guide for Operations (ERGO).

2. This compliance assessment was prepared by the NED ERGO Team; Bruce Williams,Jean Hamel, and Jim Law (NED-OD-P), Kirk Bargerhuff and Marcos Paiva (NED-PL-IA), Townsend Barker (NED-ED-WQ), William Herland (NED-SO), Sheila Harvey (NED-PD-L) and Anne Laster (NED-RE).

3. Upon approval of the assessment, the Project Manager will be tasked with development of an action plan to schedule and prioritize resources to correct findings identified in the ERGO assessment. In order that resources are programmed and dedicated to correct these problems, recommend that remediation which can be performed as routine maintenance work be completed within the next 3 years, other work should be programmed in the budget process for completion within 5 years.

4. I recommend your approval for implementation.

Bruce Williams
Environmental Compliance
Coordinator

Atch

CMT 2

1. Environmental Compliance Assessment of Edward MacDowell Lake is:

Approved X Disapproved_____ for implementation as stated.

J. C. WONG
Director of Operations

Atch

EXECUTIVE SUMMARY

An environmental compliance assessment of Edward MacDowell Lake in Peterborough, New Hampshire was conducted by an interdisciplinary team of New England Division environmental professionals on October 14, 1993.

The assessment was conducted as part of the U.S. Army Corps of Engineers Environmental Review Guide for Operations (ERGO) program. The ERGO program establishes the use of environmental compliance assessments to ensure compliance with all applicable Federal, state, local, Department of Defense (DoD), and U.S. Army laws and regulations.

An overall ERGO compliance assessment considers 12 major environmental compliance categories. Each category, Federal, state and local laws, DoD and U.S. Army Corps of Engineers regulations, and good management practices are reviewed.

Overall the project was well maintained as demonstrated by the lack of serious environmental deficiencies. The findings at Edward MacDowell Lake are as follows:

Significant Deficiencies - None
Problems that pose a direct & immediate threat to human health, safety or to the environment.

Major Deficiencies - Three (3)
Problems that require action and pose a threat to human health, safety or to the environment.

Minor Deficiencies - Ten (10)
Deficiencies that are mostly administrative in nature. These problems require monitoring or planning for future mitigation.

Management Practices - Twelve (12)
Items noted are not specifically covered by laws or regulations; however, they still require management attention.

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THE ERGO PROGRAM

The U.S. Army Corps of Engineers initiated the Environmental Review Guide for Operations (ERGO) program as a comprehensive self-evaluation and program management system for achieving, maintaining, and monitoring compliance with environmental laws and regulations at Corps of Engineers projects and facilities. Objectives of the ERGO program are to:

1) Enhance Corps of Engineers environmental compliance at Federal, state, and local levels.

2) Improve Corps of Engineers environmental management.

3) Build supporting financial programs and budgets.

4) Assure supervisors their environmental programs are being implemented effectively in accordance with Corps of Engineer goals and objectives.

Periodic internal environmental compliance assessments have been deemed necessary. These evaluations are designed to assess environmental compliance and to provide necessary feedback to supervisors for organizing, directing, and controlling environmental compliance and protection activities.

The Corps of Engineers ERGO program began with the creation of a steering committee. Arrangements were made with the U.S Army Construction Engineering Research Laboratory (USACERL) to compile all relevant Federal, Department of Defense, Army, Corps of Engineer and state and local laws and regulations to produce the draft manual.

The ERGO manual of environmental compliance assessments was pilot tested at various facilities in the Nashville District in May 1990. The program was field tested at several projects during FY 1991 and the manual was distributed as a final draft.

In January 1991, the Chief of Operations, Construction and Readiness Division (USACE), directed division and district operations offices to formally designate Environmental Compliance Coordinators (ECC's). Because it is responsible for the majority of USACE facilities, Operations Directorate was tasked with the development and maintenance of the ERGO program.

New England Division's ERGO program became operational in August 1991. An ERGO review team was established by the ECC in October 1991. The ERGO Program Manager scheduled the 18 remaining projects,including Edward MacDowell Lake, for completion in FY-94.

ASSESSMENT PROCEDURES

The ERGO assessment of Edward MacDowell Lake was conducted by a 8 person team comprised of NED personnel. The team followed a three phase approach. The first phase was to obtain pre-assessment information (see Appendix A) from the site concerning on-site activities and review applicable state or local environmental regulations.

The second phase involved the on-site portion of the assessment. This involved a briefing of project, district and/or regional management and staff, followed by a facility tour to obtain a general overview of facility operations. Typically, the team member would interview project staff responsible for a particular functional area, visually inspect the project/facility, and verify that required written documentation was in place. When possible, all deficiencies were reported to facility personnel. The team concluded the on-site portion of the assessment by briefing the project manager and staff to apprise them of the review team's findings.

The third phase involves developing the draft report and developing an action plan for addressing outstanding deficiencies. The evaluation of Edward MacDowell Lake followed the above procedures and covered the elements set forth in the 12 ERGO compliance categories.

The assessment was conducted in accordance with the best professional judgement of the ERGO team members. It should be understood that the assessment consisted of reported and sample observations taken over a short span of time relative to the period under review. Efforts were directed toward reviewing major facets of environmental performance in the period covered, and therefore, it is important to recognize that this assessment may not necessarily identify all potential problems.

Successful completion of the site-specific environmental evaluation of Edward MacDowell Lake was reliant on complete disclosure of all information regarding the operation and maintenance activities at the project.

It should be noted that failure of a manager to provide complete or adequate information to the review team does not relieve the manager of the responsibility for compliance with environmental regulations.

ERGO PROGRAM OBJECTIVES

The Environmental Review Guide for Operations (ERGO) manual is intended to serve as the primary tool for conducting environmental compliance evaluations at Corps of Engineer projects and facilities. The objectives of the program are to:

1) Compile applicable Federal laws and regulations associated with Corps of Engineers operations and activities.

2) Synthesize environmental regulations, good management practices, and risk management issues into consistent and easy to use checklists.

3) Serve as a reference document for daily operations.

4) Serve as a standard for evaluation of environmental compliance.

DESCRIPTION OF REGULATORY COMPLIANCE

This section of the report presents a summary of findings in those categories that are governed by engineering regulations, engineering manuals, Federal regulations, and state regulations. Non-regulatory items, which are referred to in this report as a management practices, are of a lower priority but require attention to correct.

Deficiencies noted in this evaluation will include the following information:

SIGNIFICANT DEFICIENCY (SIG.):

A problem categorized as significant requires immediate attention. It poses, or has high likelihood of posing, a direct and immediate threat to human health, safety, the environment, or the installation mission.

MAJOR DEFICIENCY (MAJ.):

A problem categorized as major requires action, but not necessarily immediate attention. It has the potential to result in a notice of violation from regulatory agencies. A major deficiency may pose a threat to human health, safety or the environment.

MINOR DEFICIENCY (MIN.):

A minor deficiency is mostly administrative in nature, even though it might result in a notice of violation. It may also be a temporary or occasional instance of noncompliance.

MANAGEMENT PRACTICE (MGT.):

A management practice is not considered a deficiency because it is not based on a specific regulatory requirement. Although items noted may not be specifically covered by regulation, and are not assigned severity ratings, they still require management attention.

SUMMARY OF DEFICIENCIES
for
EDWARD MACDOWELL LAKE

COMPLIANCE CATEGORY	SIG.	MAJ.	MIN.	MGT.
Air Emissions				
Cultural and Historic Resources Management			1	
Hazardous Material Management		2	1	1
Hazardous Waste Management			1	1
Natural Resources Management			4	2
Pesticide Management				
Petroleum Oil and Lubricant (POL) Management		1		1
Solid Waste Management			1	2
Special Pollutants Management (Radon,Asbestos, PCB's,Noise)				2
Underground Storage Tanks (UST) Management			1	1
Wastewater Management			1	
Water Quality Management				2
Totals	0	3	10	12

AIR EMISSIONS MANAGEMENT

FINDING: There were no air emissions findings at Edward MacDowell Lake.

CULTURAL AND HISTORIC RESOURCES MANAGEMENT

FINDING: Minor Deficiency

CONDITION: Cultural resource survey has not been completed. Reconnaissance level studies are required to research the project area, locate any historic remains, and determine the archaeological sensitivity for prehistoric resources. Various historic period remains have been observed at the project area including stone walls, building foundations, and a partially intact industrial site. A reconnaissance survey would document these resources and help ensure their preservation.

CRITERIA: Corps facilities are required to locate, inventory, and nominate all properties that appear to qualify for listing on the National Register of Historic Places (16 USC 470, 36 CFR 800, ER 1130-2-438).

EFFECT: 1) Project is not in compliance with Section 106 of the National Historic Preservation Act.
2) Cultural resources may be at risk.

SOLUTION: A reconnaissance level archaeological survey should be scheduled as soon as possible. If necessary, additional studies may be required (i.e. intensive level study) to determine the significance of sites located during the reconnaissance. Stone walls throughout the project area should be kept intact and not breached. Any historic foundations which may pose a safety hazard should be filled with a clean sand fill, kept intact, and their locations recorded. Remains of the industrial site should be monitored and any change in management practices which may affect these resources should be coordinated with NED archaeological staff. Any documentation of this site (i.e. photos, plans) would be helpful as well.

HAZARDOUS MATERIAL MANAGEMENT

FINDING: Management Practice

CONDITION: Relevant regulations, directives and guidance documents on hazardous materials are not maintained at the project.

CRITERIA: The following documents shall be maintained and kept current at the dam:

29 CFR 1910, Occupational Safety and Health Standards
40 CFR 302, Reportable Quantities of Hazardous Materials (Table 302.4)
49 CFR 172, 173, 178 and 179, Research and Special Programs Administration.
NEPA, National Environmental Policy Act
ER 500-1-1, Natural Disaster Procedures Ch.1.
EM 385-1-1, Safety and Health Requirements Manual.
Appropriate state/local regulations

SOLUTION: 1) Project Operations will obtain copies of relevant regulations and distribute to Project Manager.
2) Project Manager will assure that regulations are reviewed periodically and kept current.

COMMENTS: Failure to maintain updated regulations and guidance could result in inappropriate handling of hazardous materials, possibly resulting in environmental or personal harm.

HAZARDOUS MATERIAL MANAGEMENT

FINDING: Major Deficiency

CONDITION: Facility does not have a written Oil and Hazardous Substance Contingency Plan for spill events.

CRITERIA: The Contingency Plans should contain the following: hazardous substance storage area, designated individual to initiate spill response, periodic drills,appropriate equipment to handle spills, emergency medical procedures, key phone numbers, decontamination procedures. (ER 1130-2-434)

EFFECT: Lack of or unfamiliarity with plan can result in inappropriate or delayed emergency response exacerbating damage or injury.

SOLUTION: Plans are being developed for all projects. They will be included in the Federal Response Plan and the Flood Emergency Plan.

COMMENTS: Plan needed to insure that proper and timely action is taken during spill events to minimize environmental harm and insure public health and safety.

HAZARDOUS MATERIAL MANAGEMENT

FINDING: Major Deficiency

CONDITION: Facility does not have a MSDS for each hazardous chemical stored and used at the facility.

CRITERIA: MSDS's must be on file and readily accessible to workers for each hazardous material stored or used. (40 CFR 1910.1200(g)(1), 29 CFR 1910.1200(g)(8)).

EFFECT: In the absence of MSDS, project personnel may be unaware of hazards associated with certain chemicals or unable to take appropriate emergency action.

SOLUTION: Safety office is in process of reviewing chemical lists provided from each project. From this list MSDSs will be distributed to the projects and stored in an orderly and highly visible fashion. Project Managers will independently obtain MSDSs when purchasing new chemicals.

COMMENTS: MSDSs are necessary to assure proper product use and to mitigate harmful effects.

HAZARDOUS MATERIAL MANAGEMENT

FINDING: Minor Deficiency

CONDITION:
1. Inside flammable/combustible storage room does not meet minimum specifications.
2. Storage room does not meet parameters for ventilation and containment specified in NFPA 30 4-4.1.2 Flammable and Combustible Liquids and 29 CFR 1910.106(d)(4).

CRITERIA: Suitable capacity exhaust system. Ventilation must provide for six changes of air per hour.

SOLUTION: An exhaust fan of sufficient capacity should be installed to avoid buildup of chemical air flow vapors. Ventilation system must meet the requirements of EM 385-1-1 09.B.24.
   a. System shall provide for a complete change of air within the room at least 6 times per hour.
   b. System shall commence not more than 12 inches above the floor.

COMMENTS:
1. Poor ventilation in the paint room creates an unhealthy environment and potential fire hazard for workers.
2. Engineering has developed plans to retrofit project storage rooms to provide sufficient ventilation.

HAZARDOUS WASTE MANAGEMENT

FINDING: Management Practice

CONDITION: Not all relevant regulation, directives, and guidance documents on hazardous wastes are maintained at the facility.

CRITERIA: The following documents should be maintained and updated: 40 CFR 260-271, 40 CFR 372, 49 CFR 172-179, NEPA, state hazardous waste regulations, policy letters, ER 1130-2-434.

SOLUTION: Copies of all relevant materials are being compiled and will be distributed to the projects. Project Manager should maintain these materials in an organized and highly visible manner and update as required.

COMMENTS: Knowledge of regulations required to assure safe and environmentally compatible handling of hazardous materials.

FINDING: Minor Deficiency

CONDITION: One hazardous waste container was not labeled. (Photograph #1)

CRITERIA: All hazardous waste containers must be labeled. (He-P 1905 New Hampshire's Hazardous Waste Rules).

SOLUTION: Label all hazardous waste containers.

COMMENT: Unlabeled containers invite the possibility of mixing incompatible materials with consequent health and safety risks.

NATURAL RESOURCES MANAGEMENT

FINDING: *Minor Deficiency*

CONDITION: A detailed field survey to determine if any Federal or state listed threatened or endangered species occur in the project area is lacking. Without such a survey, the possibility that normal project operations may harm Federal or state listed species cannot be ruled out.

CRITERIA: The Federal Endangered Species Act (16 USC 1536) prohibits actions which jeopardize the continued existence of threatened or endangered species, or destroy or adversely affect critical habitat of such species. Similar protection is provided by New Hampshire Endangered Species Conservation regulations (Fis 1001.01-1001.05) and the New Hampshire Native Plant Protection Act (RSA Chapter 217 Section 217-A:9).

SOLUTION: Program funds to conduct a survey of project area to determine if any rare threatened and endangered species are present at the project. If any are found, management plans for the species should be developed and implemented.

NATURAL RESOURCES MANAGEMENT

FINDING: Management Practice

CONDITION: The existing Environmental Assessment/FONSI for operation and maintenance activities does not accurately address current conditions at the project and project impacts.

CRITERIA: An up to date Environmental Assessment describing existing project conditions and impacts of project operation on natural and cultural resources should be available.

SOLUTION: Update Environmental Assessment/FONSI.

FINDING: Minor Deficiency

CONDITION: No survey of shoreline or land erosion at Project is available.

CRITERIA: Measures shall be provided to control erosion damage to land (ER 1130-2-400 and EM 1110-1-400).

SOLUTION: Survey Project lands for erosion, and implement a shoreline and land erosion control plan.

NATURAL RESOURCES MANAGEMENT

FINDING: Management Practice

CONDITION: There are no minimum release rates established at Edward MacDowell Lake during normal and/or low flow periods. The project storage requirements were designed such that all outflow be maintained equal to inflow during non-flood periods. The project was not designed to augment low flows. During flood periods, however, minimum releases are maintained between 10-15 cfs in an effort to support downstream aquatic life in the immediate proximity of the project without contributing significantly to the downstream flood condition. At projects like Edward MacDowell Lake, where each gate has its own discharge conduit, releases are maintained during Periodic Inspections by opening gates in other conduits not being inspected.

CRITERIA: Periodic Inspections and routine maintenance require, at times, that discharge be reduced to allow safe access to the outlet for short durations (less than one hour). These unavoidable flow conditions should be gradually made to minimize stranding of downstream aquatic life.

SOLUTION: Planned (non-emergency) closure schedules for maintenance and inspection should be coordinated with Fish and Wildlife Service and State Fish and Game to ensure that critical seasons which might impact aquatic life are avoided.

NATURAL RESOURCES MANAGEMENT

FINDING Minor Deficiency

CONDITION 1: Master Plan for the project is outdated and does not reflect current development of natural or man-made resources at this project.

CRITERIA: ER 1130-2-435 section (10)(a) requires scheduling of revision of master plans within 5 years of date of the regulation, 30 December 1987.

SOLUTION: Program resources to update Master Plans within next five years.

CONDITION 2: The Fish and Wildlife Management Plans (Appendix D to the Master Plan) are outdated and do not emphasize the maintenance and restoration of habitat favorable to the production of indigenous fish and wildlife (5 year management plans are dated March 1982 and expired March 1987).

CRITERIA: Fish and Wildlife plans must address the management of all indigenous species and be based upon the following:

- inventory of fish and game species
- inventory of endangered, threatened and other special interest plant or animal species
- survey of non-game wildlife other than endangered species
- verify that fishing, hunting and trapping are authorized and controlled in conformance with Federal and state laws, local regulations and approved management plans (ER 1105-2-50, para. 2-1).

SOLUTION: 1. Update the current Fish and Wildlife Management plans to include and emphasize items mentioned above.
2. Assure that State F & W management plans are kept current and included into the Project plan.

CONDITION 3: The Forest Management Plan (Appendix B to the Master Plan) is outdated and does not adequately address the provisions for sustained production of timber and/or be compatible with multiple use resource management objectives. Five year management plan dated March 1982 expired March 1987.

CRITERIA: The Forest Management Plan must be current and include the following: (ER 1130-2-400 para. 11(1)).

- volume inventories conducted and kept current
- small volume (including firewood) sales are in accordance with regulations
- harvesting and treatment
- sustained yield
- improve vegetation conditions
- control pests
- improve watersheds
- improve wildlife habitat
- complement natural beauty values

SOLUTION: The Forest Plan needs to be revised and updated to include provisions that address the resource management objectives listed above.

FINDING: *Minor Deficiency*

CONDITION: Project OMP (Operations Management Plan) has not been developed in coordination with the Planning, Real Estate and Safety elements of the project.

CRITERIA: All Corps facilities are required to develop and maintain a project operational management plan (OMP). (ER 1130-2-400 para. 6 and para. 9 through 11 Appendix B.)

SOLUTION: 1) Develop an OMP in accordance with ER 1130-2-400 and assure that it addresses all operational projects in the Master Plan (ER 1130-2-435).
2) Verify that the OMP has been approved by the Division Commander.
3) Verify that the OMP is updated as required.

COMMENT: All project OMP's (including Edward MacDowell Lake) are scheduled for completion and approval by 1 April 94.

PESTICIDES MANAGEMENT

FINDING: There were no pesticide management findings at Edward MacDowell Lake.

PETROLEUM OIL LUBRICANT (POL) MANAGEMENT

FINDING: Management Practice

CONDITION: The facility does not have access to a current file of applicable Federal, Corps, and state/local POL regulations.

CRITERIA: The following regulations should be maintained and kept current at the facility: 29 CFR 1910, 33 CFR 153, 40 CFR 110, 112, 40 CFR 266, EM 385-1-1, EP 415-1-261, ER 500-1-1, appropriate state/local regulations.

EFFECT: Lack of or incomplete regulatory files may result in poor POL Management practices.

SOLUTION: Copies of all relevant materials will be distributed to the project. Project Manager should maintain these documents and update as necessary.

FINDING: Major Deficiency

CONDITION: Generator day tank lacks secondary containment. (Photograph #2)

CRITERIA: Regulation EM 385-1-1, Sec. 09.8.27.(c) requires that all above ground storage tanks be provided with secondary containment sufficient to contain 110% of the tanks total volume.

SOLUTION: Project personnel should procure and install an appropriate masonry or steel containment structure to provide secondary containment.

COMMENTS: Secondary containment needed to prevent leaking product from contaminating adjacent areas.

SOLID WASTE MANAGEMENT

FINDING: Management Practice

CONDITION: Miscellaneous concrete posts are stored in a scattered pile behind a maintenance building. (Photograph #3)

CRITERIA: Excess items not likely to be of future use should be recycled or properly disposed of.

EFFECT: Area is slightly unsightly providing poor aesthetics. Slight safety hazard to public (tripping).

SOLUTION: Assess need for items stored at site and properly dispose of material not likely to be of use in the future.

FINDING: Minor Deficiency

CONDITION: A waste asphalt pile exists at the sandpit area (Photographs 4 & 5).

CRITERIA: Solid wastes should be properly disposed in a state licensed landfill (ENV-WM 300 et. seq.). Violation of a State law.

EFFECT: Area is unsightly providing poor aesthetics. Slight tripping hazard to the public.

SOLUTION: Project personnel should properly dispose of the asphalt pile.

SOLID WASTE MANAGEMENT

FINDING: Management Practice

CONDITION: Project office does not recycle waste office paper, aluminum cans or glass.

CRITERIA: Project should participate in state or local recycling programs where practical. The Town of Peterborough has a mandatory recycling clause (per telephone conversation to the Selectmen's Office, (603) 924-3201) for glass, cardboard and paper. Federal compliance with state and local solid waste disposal regulations is mandatory.

SOLUTION: Expand recycling program to include waste paper, glass, and aluminum cans. Glass and cans should be taken to a local (Town of Peterborough, NH) recycling center. Office paper could be recycled at the Waltham Federal Center.

COMMENTS: Waste of resources and landfill space. Violation of Local ordinances.

SPECIAL POLLUTANTS - ASBESTOS

FINDING: Management Practice

CONDITION: An asbestos survey of Edward MacDowell Lake was conducted in the Spring of 1992. All friable asbestos materials were removed. Non-friable asbestos material was found in some heating pipe insulation and in the ceiling of the garage. None of the asbestos-containing insulation on the piping was labeled.

CRITERIA: All Corps facilities are required to conduct an asbestos survey of all their facilities. (ER 200-2-2)

SOLUTION: Where asbestos containing material (ACM) is located, the asbestos should be checked annually to assure non-friable conditions are still intact and limited personal activity should take place in those areas. The pipes should also be labeled as containing asbestos.

SPECIAL POLLUTANTS - NOISE

FINDING: Management Practice

CONDITION: A log is not maintained for complaints received on noise produced by Corps of Engineer activities and Operations.

CRITERIA: A single point of contact should be identified to address noise complaints. This POC shall keep a written log of complaints on noises produced by Corps of Engineer activities and operations.

SOLUTION: Establish a Noise Complaint log and designate a POC.

SPECIAL POLLUTANTS - RADON

FINDING: A complete radon survey was conducted at Edward MacDowell Lake to assess indoor levels of radon in FY 91. All locations reported a level of radon gas lower than 4.0 picoCuries/liter of air. Results of testing are as follows:

LOCATION	pCi/l
Edward MacDowell Lake	
Bottom of Gate House	2.30
Working Level of Gate House	1.00
Storage Building	0.30
Utility Building Working Level	0.30
Utility Building Basement	1.50
Utility Building Duplicate Basement	0.70
Operator Quarters Basement	0.50
Operator Quarters Working Level	0.40

CRITERIA: Areas sampled which test at 4.0 picoCuries/liter or lower require no further attention. Areas sampled which test at 4.0 picoCuries/liter or higher require long range testing and/or mitigation within 5 years. Areas which test at 20.0 picoCuries/liter or higher require immediate mitigation and retesting.

COMMENT: Radon survey program was conducted under the Army Radon Reduction Program (ARRP) administered by USAEHSC.

SPECIAL POLLUTANTS (PCB's)

FINDING: Potential Minor Deficiency

CONDITION: There are three (3) PCB-containing transformers located on a pole adjacent to the office (Photograph #6). There is no log documenting any information about these transformers.

CRITERIA: A written annual document log must be prepared by 1 July of each calendar year, covering the previous year for all facilities that use or store at any time at least 45 kg (99.4 lb) of PCBs contained in PCB Containers or one or more PCB Transformers (500 ppm or greater, or 50 or more PCB Large, High-, or Low-Voltage Capacitors (40 CFR 761.180(a)).

SOLUTION: Real Estate Directorate should contact the utility company regarding records for these transformers. If the company expresses an interest in removing these transformers a date should be set for their removal.

COMMENTS: Project Manager stated that the electric company has been contacted regarding the transformers. The company expressed an interest in removing the transformers in the near future. However, an exact time-schedule has not been set.

UNDERGROUND STORAGE TANKS (UST)

FINDING: Management Practice

CONDITION: Regulations pertaining to UST operation, maintenance, and closure were not available at the facility.

CRITERIA:
1) ER 1130-2-434,
2) 40 CFR 112.7
3) 40 CFR 280
4) Appropriate state and local regulations

SOLUTION: Copies of all relevant material will be distributed to the project. Project Manager should maintain these materials and update as necessary. The Project Manager should independently obtain state UST regulations from the New Hampshire Dept. of Environmental Services. Point of Contact is Tom Beaulieu at (603) 271-3644.

COMMENTS: Failure to maintain updated regulations could result in deficient monitoring/upgrading of USTs, increasing the likelihood of leakage.

WASTEWATER MANAGEMENT PROGRAM

Municipal sewer lines extend to the utility project office and building. A holding tank receives waste from the restrooms at the west end of the dam. This tank is pumped out regularly. The only other wastewater disposal systems at the project are portajohns which are brought in during the recreation season to service the area at the group shelter.

FINDING: Minor Deficiency.

CONDITION: There are floor drains in the former operator's quarters that can collect spills from vehicles parked there. It is not known where these drains discharge.

CRITERIA: Under the New Hampshire Code of Administrative Rules, ENV-WS 410.34, drains from vehicle bays must either be sealed or go to a holding tank registered with the Groundwater Bureau of the New Hampshire Department of Environmental Services. A third option exists for locations served by municipal sewers: if the municipal sewer authority gives its approval, the drain may be connected to the sewer.

SOLUTION: In all garages, seal all floor drains which could receive spills of vehicle fluids. Cleanup spills with absorbent materials and dispose properly.

WATER QUALITY MANAGEMENT

POTABLE WATER PROGRAM

The project office and utility building are supplied by one well, which also supplies the restrooms to the west of the dam. The only available information on these wells was a pump installation record supplied by the contractor. It appears to apply to the utility building well, and shows the well to have a 6-inch inside diameter, a depth of at least 200 feet, and a standing water level 60 feet below ground surface. Pump installation was 10 November 1970.

The well at the utility building and office also supplies a public restroom and sink at the west end of the dam. Consequently, it is a transient noncommunity well as it serves more than 25 people but not the same population for at least six months. The restroom at the west end of the dam does not have a fountain, however people can drink from the sink. Even though it is not intended for drinking it probably still counts as a water supply system. Project Manager plans to install a drinking fountain at the public restroom.

NED uses its Barre Falls Environmental Laboratory to collect samples and test for bacteria in drinking water. Sampling frequency is tied to usage. All wells are monitored at least quarterly during the months they are in operation. Monitoring for nitrates is required once per three year period.

FINDING: Management Practice

CONDITION: In compliance with Federal Regulation 40 CFR 142.10, the noncommunity water supply well should be registered with the State of New Hampshire Department of Environmental Services (DES).

CRITERIA: Under 40 CFR 142.10 (adopted under provisions of the Safe Drinking Water Act - Public Law 93-523), a State has primary enforcement responsibility for public water systems including registration of wells. Point of contact is Ms. Laurie Cullerot (603) 271-2947.

SOLUTION: The Edward MacDowell project manager should register the well with the NH DES. To expedite this process, Townsend Barker of Hydraulics and Water Quality Branch contacted Ms. Cullerot on 17 November 1993, requesting initiation of registration procedures. After recording basic information on the wells at the project, Ms Cullerot said that the next step would be for their inspector, Mr. Jack Mulliker, to view the site. He has a long backlog of sites to visit and it may be awhile before he gets to this project.

FINDING: Management Practice.

CONDITION: Results of routine monitoring of potable water sources should be reported to the State within 24 hours.Monitoring results cannot be properly reported to the state until the well is registered and entered into New Hampshire's system.

CRITERIA: Prompt reporting of result of potable water monitoring is required under provisions of the Safe Drinking Water Act - Public Law 93-523.

SOLUTION: When well registration is complete, notify Townsend Barker of Hydraulics and Water Quality Branch so he may arrange with the NED Lab to report monitoring results to New Hampshire DES.

NEW ENGLAND DIVISION
ERGO TEAM

Bruce Williams Program Manager
Operations Directorate
Project Operations and Readiness Division
Environmental Compliance Coordinator - NED
Member, NED's Water Quality Team

Jean Hamel
Operations Directorate
Project Operations and Readiness Division
Acting Environmental Compliance Coordinator-NED

Jim Law
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Marcos Paiva
Planning Directorate
Impact Analysis Division

Kirk Bargerhuff
Planning Directorate
Impact Analysis Division

Townsend Barker
Engineering Directorate
Water Control Division
Chairman, NED's Water Quality Team

William Herland
Safety and Occupational Health Office

Sheila Harvey
Programs Project Management Division
Industrial Hygienist

Anne Laster
Real Estate Directorate
Conveyancing Division

The following individuals participated in the pre-assessment evaluation, field inspection and/or in the research and evaluation of environmental compliance guidance:

Edward MacDowell Lake
Brent Jasper - Project Manager
James Holbrook - Park Ranger

Merrimack River Basin
John Burke

Appendix A

ERGO

Environmental Review Guide for Operations

PRE-ASSESSMENT ENVIRONMENTAL MANAGEMENT QUESTIONNAIRE

This questionnaire will provide background information necessary to plan and conduct an environmental compliance assessment.

Name of Facility: EDWARD MACDOWELL LAKE

QUESTION/DESCRIPTION	RESPONSE	REFERENCE
SECTION 1, Air Emissions Management:		
1. Does facility operate a fuel burner (central steam plant, or hot water or hot water steam boiler)?	Y	If YES see ERGO items 1-4 through 1-15.
2. Does facility operate an incinerator?	N	If YES see ERGO items 1-16 through 1-18.
3. Does facility dispense, store, or transfer gasoline?	Y	If YES see ERGO items 1-19 through 1-23.
4. Does facility have volatile organic compounds (VOCs)(generally, but not exclusively, found in solvents)?	N	If YES see ERGO items 1-24 through 1-28.
5. Does facility have fugitive emissions from volatile hazardous air pollutant (VHAP) equipment?	N	If YES see ERGO items 1-29 through 1-35.
6. Does facility use VOC-based solvent degreasers?	N	If YES see ERGO item 1-36.

QUESTION/DESCRIPTION	RESPONSE	REFERENCE

SECTION 2, Cultural and Historic Resources Management:

1. Does the facility have any properties under its jurisdiction?

Y — If YES see ERGO items 2-4 through 2-10.

2. Does the facility have cultural resources? List the facility's cultural resources below:

Y — If YES see ERGO items 2-11 through 2-14.

Historical monument in stone wall along boundary line.
Stone walls - Cellar holes - Raceway for old hycro plant

a. Are the facility's master plan or operational management plan (OMP) public documents?

Y — If YES see ERGO item 2-13.

3. Does the facility have an operational project?

Y — If YES see ERGO item 2-15.

4. Does the facility have any Native American graves or artifacts, or have any been discovered during an operation?

N — If YES see ERGO item 2-16.

5. Does the facility have an archeological or historical collection?

N — If YES see ERGO items 2-17 through 2-28.

QUESTION/DESCRIPTION	RESPONSE	REFERENCE
SECTION 3, Hazardous Materials Management:		
1. Does the facility store any hazardous materials?	Y	If YES see ERGO items 3-5 through 3-8.
2. Have there been any releases of hazardous substances at the facility?	N	If YES see ERGO items 3-9 through 3-11.
3. Are there any extremely hazardous substances at the facility?	N	If YES see ERGO item 3-12 and 3-13.
4. Does the facility: Have extremely hazardous substances in excess of 500 lbs or the threshold planning quantity (see appendix III-1); have hazardous chemicals in excess of 10,000 lbs; or fall under Standard Industrial Classification Codes 20 to 39?	N	If YES see ERGO item 3-12 and 3-13.
5. Does the facility store compressed gases, flammable/combustibles, or acids?	Y	If YES see ERGO items 3-14 through 3-27.
6. Does the facility transport hazardous material, or offer such materials for transport?	N	If YES see ERGO items 3-28 through 3-31.

QUESTION/DESCRIPTION	RESPONSE	REFERENCE
SECTION 4, Hazardous Waste Management:		
1. Is facility a generator of hazardous waste?	Y	If YES see ERGO items 4-8 through 4-15.
a. Is facility a small quantity generator?	N	If YES see ERGO items 4-16 through 4-18.
b. Is facility a very small quantity generator?	Y	If YES see ERGO item 4-19.

Complete this section before proceeding.

Any waste which is not excepted, which is listed in 40 CFR 261, or which exhibits the following characteristics is a hazardous waste:

- Ignitability (flash point <140 F)
- or Corrosivity (pH <2 or >12.5)
- or TCLP Toxicity (for As,Ba,Cd,Cr,Pb,Hg,Se,Ag, and selected pesticides.
- or Reactive. (or CN)

The following are hazardous wastes that may typically be found at a Corps facility:

	CHECK IF USED AT THIS FACILITY	Vol Gen/mo lb.	Vol Gen/mo Kg.	Vol Accum lb.	Vol Accum Kg.
___	* Solvents	___	___	___	___
✓	Liquid Paint	1	___	20	___
✓	Paint stripper, remover, or thinner	1	___	4	___
___	Spray paint booth air filters	___	___	___	___
___	Pesticides, Insecticides, Herbicides, etc.	___	___	___	___
___	NBC filters and test kits	___	___	___	___
___	DS2 (diethlene triamine)	___	___	___	___
___	STB (super topical bleach)	___	___	___	___

___	Ordnance, ammunition, explosives & residues	___	___	___	___
___	Battery acid & Caustics (in unserviceable batteries)	___	___	___	___
___	Some pharmaceuticals	___	___	___	___
___	POL Tank Farm fuel system filters	___	___	___	___
___	De-icing solution	___	___	___	___
___	Printing ink, ink solvents and cleaners	___	___	___	___
___	Absorbent materials and soil contaminated with hazardous waste	___	___	___	___
___	Other WASTE OIL	3	___	20	___
___	Other_____	___	___	___	___
___	Other_____	___	___	___	___
	TOTAL	___	___	___	___

* e.g., Trichlorethane, Methylene, chloride, Tetrachloroethylene, 1,1,1 Trichloroethane, Carbon Tetrachloride, Chlorinated Fluorocarbons, Toluene, MEK, Break-free in liquid form, Mineral Spirits, Xylene

USEPA Generator Designation: ___ Unregulated ___ Small Qty ___ Large Qty

QUESTION/DESCRIPTION	RESPONSE	REFERENCE
2. Does facility export/import hazardous waste from/to the United States?	N	If YES see ERGO items 4-23 through 4-31.
3. Does facility transport hazardous waste?	N	If YES see ERGO items 4-32 through 4-37.
4. Does facility have a treatment, storage, or disposal facility (TSDF)?	N	If YES see ERGO items 4-38 through 4-74.

QUESTION/DESCRIPTION	RESPONSE	REFERENCE
a. Does the TSD facility receive waste from a foreign source?	N	If YES see ERGO item 4-42.
b. Does facility receive waste from off-site sources?	N	If YES see ERGO items 4-46 and 4-47.
c. Does facility handle ignitable, reactive, or incompatible wastes?	N	If YES see ERGO item 4-65 and 4-67.
5. Does facility have hazardous waste containers?	Y	If YES see ERGO items 4-75 through 4-86.
6. Does facility store hazardous wastes in tanks?	N	If YES see ERGO items 4-87 through 4-101.
7. Does facility use surface impoundment as a means of treatment, storage, or disposal of hazardous wastes?	N	If YES see ERGO items 4-102 through 4-110.
8. Does facility have waste piles?	N	If YES see ERGO items 4-111 through 4-118.
9. Does facility have land treatment of hazardous waste?	N	If YES see ERGO items 4-119 through 4-126.
10. Does facility have hazardous waste in landfills?	N	If YES see ERGO items 4-127 through 4-137.

QUESTION/DESCRIPTION	RESPONSE	REFERENCE
11. Does facility incinerate hazardous waste?	N	If YES see ERGO items 4-138 through 4-147.
12. Does facility dispose of hazardous waste in miscellaneous units?	N	If YES see ERGO items 4-148 and 4-149.
13. Does facility have thermal treatment facilities?	N	If YES see ERGO items 4-150 through 4-152.
14. Does facility have chemical, physical, or biological treatment facilities?	N	If YES see ERGO items 4-153 through 4-155.
15. Does facility have restricted wastes?	N	If YES see ERGO items 4-156 through 4-168.
SECTION 5, Natural Resources Management:		
1. Does facility have any construction projects?	Y	If YES see ERGO item 5-4.
2. Does facility have land management responsibilities?	Y	If YES see ERGO items 5-7 and 5-8.
3. Does facility have floodplains or wetlands?	Y	If YES see ERGO item 5-9.
4. Does facility contain a shoreline?	Y	If YES see ERGO item 5-12.

QUESTION/DESCRIPTION	RESPONSE	REFERENCE
5. Does facility have endangered or threatened species?	?	If YES see ERGO items 5-13 and 5-14.
SECTION 6, Pesticides Management:		
1. Do facility personnel engage in the application of pesticides?	N	If YES see ERGO items 6-7 through 6-16.
2. Does facility store, mix, or formulate pesticides?	N	If YES see ERGO items 6-17 through 6-28.
a. Does facility store/use pesticides classified highly toxic or moderately toxic (bearing DANGER, POISON, WARNING, or the skull and crossbones symbol)?	N	If YES see ERGO items 6-20 through 6-27.
3. Does facility dispose of pesticides?	N	If YES see ERGO items 6-29 through 6-33.

QUESTION/DESCRIPTION	RESPONSE	REFERENCE
SECTION 7, Petroleum, Oil and Lubricant (POL) Management:		
1. Does the facility store, transport, or dispense petroleum products?	Y	If YES see ERGO items 7-5 through 7-12.
2. Have there been any discharges of oil at the facility?	N	If YES see ERGO items 7-13 through 7-14.
3. Does the facility have any bulk storage tanks over 660 gallons?	N	If YES, see ERGO item 7-16.
4. Does the facility use dikes as a means of containment for petroleum storage tanks?	Y	If YES see ERGO items 7-17 and 7-18.
5. Does the facility have any pipelines?	N	If YES see ERGO items 7-20 through 7-22.
6. Does the facility sell used oil?	N	If YES, see ERGO item 7-23.
SECTION 8, Solid Waste Management:		
1. Does the facility collect or store solid waste on site?	Y	If YES, see ERGO items 8-4 through 8-12.
2. All Corps facilities must should recycle and reduce solid waste.	Y	See ERGO item 8-13.

QUESTION/DESCRIPTION	RESPONSE	REFERENCE
a. Does facility have over 100 office workers?	N	If YES see ERGO item 8-14.
b. Do more than 500 families reside at the facility?	N	If YES see ERGO item 8-15.
c. Does the facility generate waste corrugated containers?	Y	If YES see ERGO item 8-16.
3. Does facility have land disposal on site?	N	If YES see ERGO items 8-17 through 8-31.
a. Does facility dispose of water treatment plant sludges?	N	If YES see ERGO 8-18.
b. Does facility dispose of incinerator or air pollution control residues?	N	If YES see ERGO item 8-19.
c. Does the facility accept special wastes?	N	If YES see ERGO item 8-21.
4. Does the facility have a closure site?	N	If YES, see ERGO items 8-32 and 8-33.
5. Does the facility have a new landfill site?	N	If YES, see ERGO items 8-34 and 8-35.
6. Does facility have a thermal processing facility?	N	If YES see ERGO items 8-36 through 8-49.

QUESTION/DESCRIPTION	RESPONSE	REFERENCE
7. Does the facility utilize resource recovery facilities?	N	If YES see ERGO items 8-50 and 8-51.
a. If the facility does NOT utilize resource recovery facilities, a report must be filed with the Administrator explaining the decision not to utilize.	N/A	See ERGO item 8-50.
SECTION 9, Special Pollutants Management:		
1. Does facility have PCBs of any kind?	Y	If YES, see ERGO items 9-4 through 9-11.
a. Does facility have a PCB waste landfill?	N	If YES, see ERGO item 9-10.
b. Does facility have PCB storage or disposal facilities?	N	If YES, see ERGO item 9-11.
2. Does facility have PCB transformers?	Y	If YES, see ERGO items 9-12 through 9-18.
3. Has facility had a PCB spill?	N	If YES see ERGO item 9-19.
4. Does facility have PCB Items (PCB-contaminated heat transfer or hydraulic systems, electromagnets, switches, voltage regulators, capacitors, circuit breakers, reclosers, or cables)?	N	If YES see ERGO items 9-20 through 9-23.
5. Does facility use PCBs in research?	N	If YES see ERGO item 9-24.

QUESTION/DESCRIPTION	RESPONSE	REFERENCE
6. Does facility store PCBs?	N	If YES see ERGO items 9-25 through 9-29.
7. Does facility transport PCBs or PCB Items?	N	If YES see ERGO items 9-30 and 9-31.
8. Does facility dispose of PCBs or PCB Items?	N	If YES see ERGO items 9-32 through 9-41.
9. Does facility demolish, renovate, or strip components from structures containing friable asbestos?	N	If YES see ERGO items 9-42 through 9-52.
10. Does facility dispose, or transport for disposal, asbestos or asbestos-containing waste?	N	If YES see ERGO items 9-53 through 9-57.
11. Is facility located in an area with a potential radon problem?	N	If YES see ERGO items 9-58 through 9-60.
12. Does facility have any possible sources of noise pollution, or have a noise hazardous area?	Y	If YES see ERGO items 9-61 through 9-68.
SECTION 10, Underground Storage Tanks (USTs) Management:		
1. Does facility have organizational fuel tanks?	Y	If YES see ERGO item 10-5.
2. Has facility repaired, or is it planning to repair, a UST?	N	If YES see ERGO item 10-10.

QUESTION/DESCRIPTION	RESPONSE	REFERENCE
3. Does facility have hazardous waste USTs?	N	If YES see ERGO item 10-19.
4. Does facility have a deferred UST?	N	If YES see ERGO item 10-20.
5. Does facility have a metallic UST?	N	If YES see ERGO items 10-23 and 10-35.
6. Does facility have newly-installed USTs (i.e., after May, 1986)?	Y	If YES see ERGO items 10-24 through 10-27.
7. Have facility USTs undergone a change of service, or closure?	N	If YES see ERGO items 10-28 through 10-34.
8. Does facility have substandard USTs?	N	If YES see ERGO item 10-35.
SECTION 11, Wastewater Management:		
1. Does facility have a floating plant?	Y	If YES see ERGO item 11-4.
2. Does facility have any point source discharges, or does facility have domestic sewage treatment plants?	N	If YES see ERGO items 11-5 through 11-8.

QUESTION/DESCRIPTION	RESPONSE	REFERENCE
3. Does facility have storm water discharge not covered by a NPDES permit?	N	If YES see ERGO item 11-9.
4. Does facility discharge to a privately-owned treatment works (POTW)?	N	If YES see ERGO items 11-10 through 11-12.
5. Does facility have any personnel engaged in the operation of water pollution control devices?	N	If YES see ERGO item 11-13.
6. Does facility have a wastewater treatment plant?	N	If YES see ERGO items 11-14 and 11-15.
7. Does facility have electroplating operations?	N	If YES see ERGO item 11-16 through 11-27.
8. Does facility conduct or issue permits for dredging operations?	N	If YES see ERGO items 11-28 through 11-35.
SECTION 12, Water Quality Management:		
1. Does facility perform contaminant monitoring on its water supply?	N	If YES see ERGO items 12-18 through 12-43.
2. Is facility located near a sole source aquifer?	N	If YES see ERGO item 12-44.

QUESTION/DESCRIPTION	RESPONSE	REFERENCE
3. Does facility use surface water or ground water under the influence of surface water for drinking water?	N	If YES see ERGO items 12-45 through 48.
4. Does facility have recreational potable water sources?	Y	If YES see ERGO item 12-49.
5. Does facility have swimming beaches?	N	If YES see ERGO item 12-50.
6. Does facility have swimming pools?	N	If YES see ERGO item 12-51.
7. Do facility's waters support watercraft?	Y	If YES see ERGO items 12-52.
8. Is facility authorized to provide emergency drinking water?	N	If YES see ERGO item 12-53.

Signature of individual completing this form: Brent J. Jasper BRENT J. JASPER, PROJECT MANAGER

Date completed: 15 SEP 93

QUESTION/DESCRIPTION	RESPONSE	REFERENCE
11. Does facility incinerate hazardous waste?	____	If YES see ERGO items 4-138 through 4-147.
12. Does facility dispose of hazardous waste in miscellaneous units?	____	If YES see ERGO items 4-148 and 4-149.
13. Does facility have thermal treatment facilities?	____	If YES see ERGO items 4-150 through 4-152.
14. Does facility have chemical, physical, or biological treatment facilities?	____	If YES see ERGO items 4-153 through 4-155.
15. Does facility have restricted wastes?	____	If YES see ERGO items 4-156 through 4-168.
SECTION 5, Natural Resources Management:		
1. Does facility have any construction projects?	YES BUT NOT RESPONSIBILITY OF N.H. FISH AND GAME	If YES see ERGO item 5-4.
2. Does facility have land management responsibilities?	YES	If YES see ERGO items 5-7 and 5-8.
3. Does facility have floodplains or wetlands?	YES	If YES see ERGO item 5-9.
4. Does facility contain a shoreline?	YES	If YES see ERGO item 5-12.

QUESTION/DESCRIPTION	RESPONSE	REFERENCE
5. Does facility have endangered or threatened species?	YES ONLY TRANSIENTS	If YES see ERGO items 5-13 and 5-14.

COMPLETED BY BILL INGHAM NMFBD (203) 271-2501

SECTION 6, Pesticides Management:

1. Do facility personnel engage in the application of pesticides?	____	If YES see ERGO items 6-7 through 6-16.
2. Does facility store, mix, or formulate pesticides?	____	If YES see ERGO items 6-17 through 6-28.
a. Does facility store/use pesticides classified highly toxic or moderately toxic (bearing DANGER, POISON, WARNING, or the skull and crossbones symbol)?	____	If YES see ERGO items 6-20 through 6-27.
3. Does facility dispose of pesticides?	____	If YES see ERGO items 6-29 through 6-33.

Appendix B

CENED-OD-P 12 June 1992

MEMORANDUM FOR NED Executive Staff

SUBJECT: NED Environmental Compliance Coordinator

1. In January 1991, John Elmore, Chief, Operations, Construction and Readiness Division, directed division and district operations offices to formally designate Environmental Compliance Coordinators (ECC's). The Director of Operations designated Bruce Williams, Project Operations and Readiness Division as the New England Division ECC.

2. In a follow-up memo dated 31 March 1992, The Director of Civil Works expanded the role of the Environmental Compliance Coordinators to be utilized as division or district environmental coordinators. This is a coordination, as opposed to an operative assignment. The ECC's will support rather than assume environmental compliance responsibilities of the various functional elements (Planning, Engineering, Project Program Management, Logistics, Safety and Occupational Health, and Real Estate, etc.).

3. The Corps of Engineer objective is to develop and maintain a comprehensive and consistent environmental compliance program utilizing the existing Operations "stovepipe", since Operations is responsible for the majority of Corps facilities. In the future, the ECC should be included in the review process of programs or projects that involve environmental compliance as part of the construction, operation or maintenance activities at Corps owned or operated facilities and projects.

4. As a part of the USACE Facilities Environmental Compliance Program, the Director of Civil Works recommended that Commanders should also establish and chair an interdisciplinary Environmental Compliance Steering Committee with representatives from the various affected offices throughout NED. Rather than develop parallel organizations performing the same function, I am tasking the NED Executive Staff to serve an additional function as the Environmental Compliance Steering Committee. The Director of Operations will provide direction and oversight to the ECC and overall coordination with NED Executive Staff.

JAMES K. HUGHES
LTC, EN
Commanding

cf:
Distribution "A"
Bruce Williams ECC

DEPARTMENT OF THE ARMY
U.S. Army Corps of Engineers
WASHINGTON, D.C. 20314-1000

REPLY TO ATTENTION OF:

12 MAR 1992

CECW-OA

S: 31 March 1992

MEMORANDUM FOR COMMANDERS, ALL MAJOR SUBORDINATE COMMANDS, DISTRICT COMMANDS, AND LABORATORIES

SUBJECT: USACE Facilities Environmental Compliance

1. In June 1991, Lieutenant General H. J. Hatch, Chief of Engineers, assigned me the mission of assuring that all USACE facilities and associated lands meet environmental standards contained in relevant Federal, DoD, Army, state, and local laws and regulations. In an effort to ensure USACE facilities environmental compliance, commanders are directed to initiate an environmental assessment/deficiency correction program for all Corps property utilizing the Environmental Review Guide for Operations (ERGO). Our overall goal is to complete environmental assessments and develop corrective action plans at all Corps projects and facilities by the end of FY94.

2. ERGO is a checklist of environmental laws and regulations, good management practices, and risk management issues. ERGO was designed as a self assessment tool, but can also be used for formal, or external assessments. Project and facility managers, with technical assistance from district elements, state authorities or private sector contractors, can use ERGO to determine if their operations are being conducted in accordance with environmental laws and regulations. ERGO assessments are a proactive approach to environmental compliance and protection. Findings identified in ERGO assessments should be prioritized and remediation measures performed as routine maintenance work or programmed in the budget process.

3. Civil Works Operations elements are already implementing ERGO, with a goal of completing ERGO assessments at 25 percent of Corps O&M General funded operating projects and facilities this FY. I now ask that you schedule and conduct ERGO assessments at facilities and projects operated with other than O&M General funds (e.g. Mississippi River and Tributaries funded projects, district motor pools, regional warehouses, Corps operated printing plants and photo labs, etc.).

4. ERGO was initially developed for use at operating projects. Since we are now expanding its application, you may find that some refinement is required to thoroughly assess facilities not considered when preparing the current manual. Contact Dr. Diane Mann of CERL-ENM at (217) 373-6741, for help in dealing with facilities and regulations not currently covered in the manual.

CECW-ON
SUBJECT: USACE Facilities Environmental Compliance

Recommendations for improving the checklist can be directed to Dr. Mann at Department of the Army, Construction Engineering Research Laboratory, Corps of Engineers, P.O. Box 9005, Champaign, Illinois 61826-9005. From efficiency and comparative standpoints we are committed to using a single environmental compliance protocol throughout USACE.

5. I encourage all elements to take a teamwork approach, using existing expertise, rather than developing parallel organizations performing the same function, to initiate, develop, and maintain environmental compliance and assurance at all USACE operated and funded projects, facilities, and activities. This teamwork approach will minimize duplicating effort and assessment costs. Commanders, if they have not already done so, should also establish and chair an interdisciplinary Environmental Compliance Steering Committee with representatives from the various affected offices throughout your organization. The steering committee will provide direction and oversight.

6. In January 1991, John Elmore, Chief, Operations, Construction and Readiness Division, directed division and district operations offices to formally designate Environmental Compliance Coordinators (ECCs). Hereafter, these coordinators will be utilized as division or district environmental compliance coordinators. This is a coordination, as opposed to an operative, assignment. The ECCs will support rather than assume environmental compliance responsibilities of the various functional elements (Planning, Engineering, Project Program Management, Logistics, Safety and Occupation Health, and Real Estate). Our objective is to develop and maintain a comprehensive and consistent environmental compliance program, utilizing the existing Operations "stovepipe", since Operations is responsible for the majority of USACE facilities.

7. We will distribute revised ERGO manuals and follow on compliance materials to each currently designated division and district ECC for dissemination to offices involved in environmental compliance throughout your organization. If there are any updates to the current list of ECCs, please forward their name, office symbol, FTS and commercial telephone numbers, Fax number, and Corps Mail I.D. to CECW-OA, ATTN: Jim Wolcott, by 31 March 1992. Field Operating Activities and Laboratories should also designate and provide information on ECCs.

FOR THE COMMANDER:

ARTHUR E. WILLIAMS
Major General, USA
Director of Civil Works

DEPARTMENT OF THE ARMY
U.S. Army Corps of Engineers
WASHINGTON, D.C. 20314-1000

06 NOV 1991

REPLY TO
ATTENTION OF:

CECW-ON (1130-2-2)

MEMORANDUM FOR COMMANDERS, ALL MAJOR SUBORDINATE COMMANDS, DISTRICT COMMANDS, FIELD OPERATING ACTIVITIES AND LABORATORIES

SUBJECT: USACE Facilities Environmental Compliance Program (Internal)

1. I recently reassigned the mission of assuring that all USACE facilities and associated lands meet environmental standards contained in relevant Federal, DoD, Army, state, and local laws and regulations to the Director of Civil Works. This action is in response to your comments regarding implementing an environmental compliance initiative within USACE.

2. Program oversight will be provided by a steering committee chaired by the Deputy Director of Civil Works, with Logistics, Military Programs, Office of Counsel, Real Estate, Research and Development, Safety and Occupational Health and the U.S. Army Toxic and Hazardous Materials Agency (USATHAMA) represented. An Environmental Compliance Branch within Operations, Construction and Readiness Division will develop, coordinate, and manage the program. Civil Works will provide further details as the USACE Facilities Environmental Compliance Program unfolds.

3. The Corps has an ethical and legal obligation to protect our environment through prevention, compliance, restoration and stewardship. We are counting on your support and enthusiasm, coupled with the evolving USACE Facilities Environmental Compliance Program, to demonstrate our commitment to, and capabilities in, environmental protection.

H. J. HATCH
Lieutenant General, USA
Commanding

DEPARTMENT OF THE ARMY
U.S. Army Corps of Engineers
WASHINGTON, D.C. 20314-1000

REPLY TO ATTENTION OF:

S: 15 February 1991

CECW-ON

MEMORANDUM FOR MAJOR SUBORDINATE COMMANDS AND DISTRICT COMMANDS

SUBJECT: Environmental Review Guide for Operations (ERGO)

1. I am enclosing the Environmental Review Guide for Operations (ERGO), a checklist for analyzing compliance with environmental laws and regulations at our operating projects. Copies are being sent to all District Operations offices for distribution to projects. We are releasing ERGO as a test document for use during the remainder of FY 91. An implementation workshop is in the planning stage. Specifics will be provided later.

2. Lieutenant General Hatch, in his 14 February 1990 letter, "Strategic Direction for Environmental Engineering", echoed Secretary Cheney's call for DOD to be the "Federal leader in environmental compliance and protection." ERGO is a pro-active approach to compliance.

3. The Construction Engineering Research Laboratory developed ERGO. A steering committee with Division, District and project members from Operations elements provided guidance and direction. Their goal was to produce a self-assessment tool for managers of operating projects with District teams, State agencies, contractors and the United States Army Toxic and Hazardous Waste Agency as potential sources of support.

4. Environmental compliance is a legal and ethical responsibility, an integral part of doing business. I ask that you apply ERGO at one or more projects in each District this FY.

5. We will need feedback to update ERGO for full implementation in FY 92. Every Division and District Operations office should formally designate an environmental compliance coordinator. These individuals will be our POCs regarding ERGO and other environmental matters. They will act as liaisons with the various functional areas within Operations organizations, and with POCs from other elements with environmental responsibilities. Please forward the names, office symbols, and telephone numbers of your Division and District environmental compliance coordinators to CECW-ON, ATTN: Jim Wolcott by 15 February 1991.

FOR THE DIRECTOR OF CIVIL WORKS:

JOHN P. ELMORE
Chief, Operations, Construction and
Readiness Division
Directorate of Civil Works

DEPARTMENT OF THE ARMY
U.S. Army Corps of Engineers
WASHINGTON, D.C. 20314-1000

DEC 1991

REPLY TO
ATTENTION OF:

10 January 1992

CECW-ON

MEMORANDUM FOR MAJOR SUBORDINATE COMMANDS

SUBJECT: FY 92 Environmental Assessments at Operating Projects

1. As managers of over 400 water resources projects and stewards of 11.7 million acres of land and water, we individually and corporately have an ethical and legal responsibility to protect the environment. Your positive response to the Environmental Review Guide for Operations (ERGO) we distributed last January is appreciated. We are now ready to proceed with an organization-wide series of ERGO assessments. The FY 92 target is to complete ERGO assessments at 25 percent of our O&M General funded operating projects and facilities. The remainder will be assessed within the following two years. Assessments of facilities and projects operated with other than O&M General funds will be addressed by separate memorandum.

2. As an indication of the importance of this effort, we are providing dedicated O&M funding from headquarters to insure that these assessments are completed. Enclosed is a list of funds available for allocation to each division. These funds are for conducting assessments and converting findings into corrective action plans. Corrective actions are to be implemented through routine budgeting and reprogramming procedures. We ask that you respond with a list of projects, by district, at which ERGO evaluations will be conducted in FY 92, and the portion of your division's total allocation we should distribute to each project on your list. Include the CWIS number with each project you identify. Please respond to Denise White of our Natural Resources Management Branch (CECW-ON) by 10 January 1992.

3. In selecting projects and facilities for FY 92 assessments, we recommend that you concentrate on locations having the greatest potential for significant compliance shortfalls. When evaluating projects, evaluate all functions (hydropower, recreation, etc.) at the same time, to obtain comprehensive project assessments and action plans.

4. Our overall FY 92 budget for ERGO assessments is based on an estimated average cost of $13K per project. To contain costs, use ERGO in conjunction with the representative sampling techniques presented at the Kansas City and Dallas ERGO orientation sessions.

CECW-ON
SUBJECT: FY 92 Environmental Assessments at Operating Projects

Contact Dr. Diane Mann of Construction Engineering Research Laboratory (CERL) at 217-373-6741 for help in designing representative sampling formats.

5. ERGO was developed as a self-assessment tool for managers of operating projects, with district teams, state agencies, and contractors as potential sources of support. Because of the complexity of the laws and regulations, several respondents from the FY 91 effort commented on the benefits of inter disciplinary teams, including representation from offices such as Engineering, Logistics, Planning, Real Estate, and Safety and Occupational Health. While we are not specifying the way this first round of assessments is to be conducted, we are requiring the involvement, to the extent possible, of personnel from the project or facility being assessed to maximize training benefits. We are also emphasizing quality products that will withstand independent scrutiny.

6. Real Estate is responsible for reviewing user compliance with real estate instrument provisions, and reviewing environmental compliance clauses in such outgrants. ERGO is designed to apply to operating projects and facilities, including outgrants. We understand that in some locations the concept of applying ERGO to outgrants and concessions is surfacing unanticipated issues. Outgrant related issues will be addressed at the joint Real Estate/Natural Resources Meeting scheduled for January 1992. Please be sure that your representatives come to that meeting with complete and current information, both positive and negative. More specific guidance will be issued following that meeting.

7. In January 1992, we will distribute an updated ERGO manual reflecting FY 91 user feedback and incorporating new and revised laws and regulations. As you proceed with ERGO assessments in FY 92, it is especially important that you record "lessons learned" and track costs per assessment, including report and action plan development costs.

8. In support of our commitment to promote environmental compliance at all levels and functions, we have tasked CERL with developing and conducting ERGO orientation programs at our districts during the FY 92/93 time frame. A video based ERGO training course has also been approved for development by Huntsville Division. Additional information will be provided as these projects progress.

CECW-ON
SUBJECT: FY 92 Environmental Assessments at Operating Projects

3. Periodic EMAP assessments are the foundation of our environmental compliance program and your comments and recommendations are welcome at any time. They can be directed to Denise White at 202-272-0794.

FOR THE DIRECTOR OF CIVIL WORKS:

Encl

JOHN P. ELMORE, P.E.
Chief, Operations, Construction
and Readiness Division
Directorate of Civil Works

ENVIRONMENTAL REVIEW GUIDE FOR OPERATIONS (ERGO)

FISCAL YEAR 92 BUDGET DISTRIBUTION

The following is a listing of funding distribution in thousands of dollars to division offices for performing ERGO assessments. NOTE: Construction General (CG) and Mississippi River and Tributaries (MR&T) funded projects were not considered.

Division	Amount
LMD	145.0
MRD	105.0
NAD	95.0
NCD	210.0
NED	105.0
NPD	130.0
ORD	455.0
SAD	185.0
SPD	65.0
SWD	430.0
TOTAL	1,925.0

Enclosure 1

DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS
KINGMAN BUILDING
FORT BELVOIR, VA 22060-

REPLY TO
ATTENTION OF:

CEIG-I (20-1g)

17 DEC 1991

MEMORANDUM FOR ALL DISTRICT AND DIVISION COMMANDERS

SUBJECT: Environmental Compliance Concerns Within USACE

1. Earlier this year my office completed a systemic inspection of environmental compliance on lands controlled by USACE. A copy of this report has been recently distributed to your command and should be reviewed by you and members of your staff. We reported to the Chief that compliance problems exist across USACE with the many Federal, State and local environmental laws. We found at HQUSACE, and throughout the Corps:

a. Organizational confusion as to who was in charge of environmental compliance.

b. Lack of comprehensive guidance.

c. Lack of Corps-wide policy on disposal of our hazardous materials and hazardous waste.

d. Training shortfalls.

e. Inadequate environmental assessment/inspection on lands we control.

f. Failure to program resources to insure environmental compliance.

g. Problems with environmental compliance on Corps lands leased to others for use.

h. Unfulfilled commitments to mitigate environmental impact on many Corps projects.

2. Our inspection teams visited fourteen districts in eight divisions and a laboratory. Inspectors physically toured over 240 different sites. They found compliance issues at virtually every site visited. Enclosed are pictures of typical findings.

3. I would like to emphasize that the situations shown in the pictures are typical and were not found at only one location or in any one particular district. Rather, they are likely to exist at any site or possibly at every site. I urge you and your staff to make it a special point to visit all land under your jurisdiction, especially lands leased and outgranted to others, with a keen eye to discover any environmental compliance

violations or problems. You then need to follow through and insure resources are programed and dedicated to correct these problems in a timely fashion.

4. The U.S. Army Toxic and Hazardous Materials Agency (USATHAMA) is available to answer environmental questions at 1-800 USA EVHL. My POC for this action is LTC Dan Shuey or LTC Fred Streb at Commercial (703)355-3575 or DSN 345-3575.

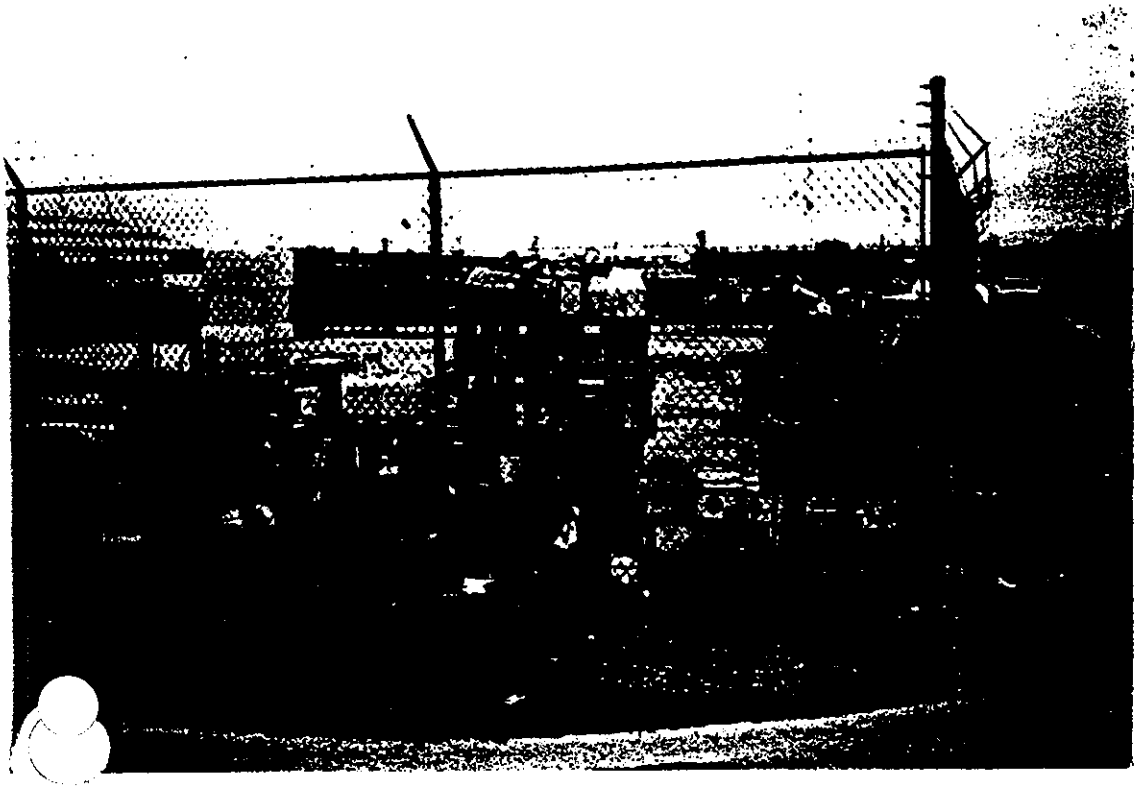
FOR THE COMMANDER:

GERALD M. TIPPINS
Colonel, IG
The Engineer Inspector General

Encl

CF:
CECER
CECRL
CETEC
CEWES
CEHSC
CETHA
CECW-ZA (MG Williams)
CECW-O (Mr. Elmore

ENVIRONMENTAL INSPECTION PHOTOGRAPHS



Photograph 1

Storage Area

Area of Concern:

1. Violation of RCRA, CERCLA, and TSCA

2. Soil Contamination

3. Improper storage/disposal of HTW

Photograph 2

Maint. & Paint Shop

Area of Concern:

1. Violation of CWA

2. Requires NPDES permit

3. Discharge of Hazardous waste into reported storm drain

Photograph 3

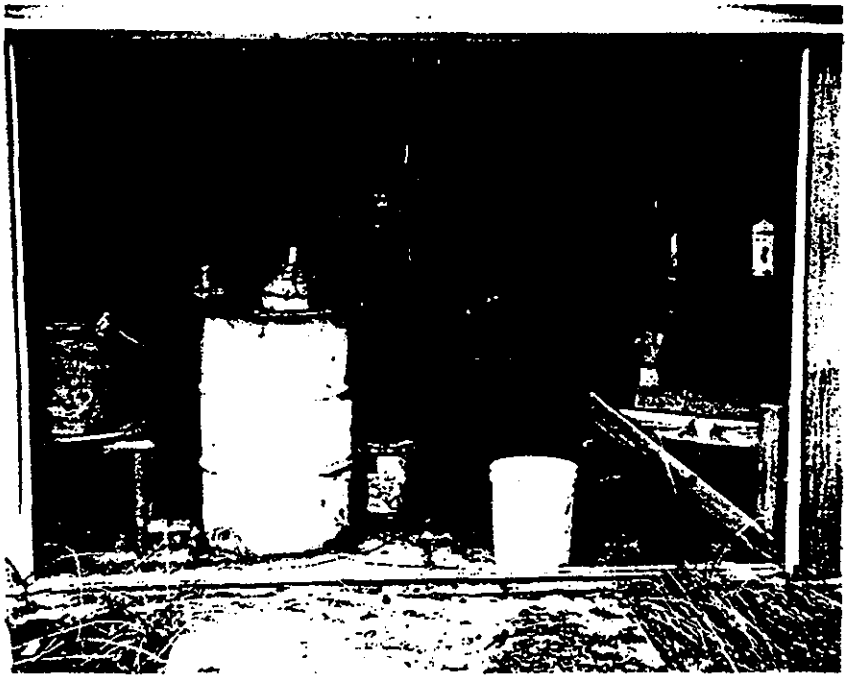
Maint. & Paint Storage Area

Area of concern:

1. Violation of RCRA and CWA

2. NPDES permit required

3. Discharge of Hazardous Material into reported storm drain



Photograph 4

Used Oil Storage Area

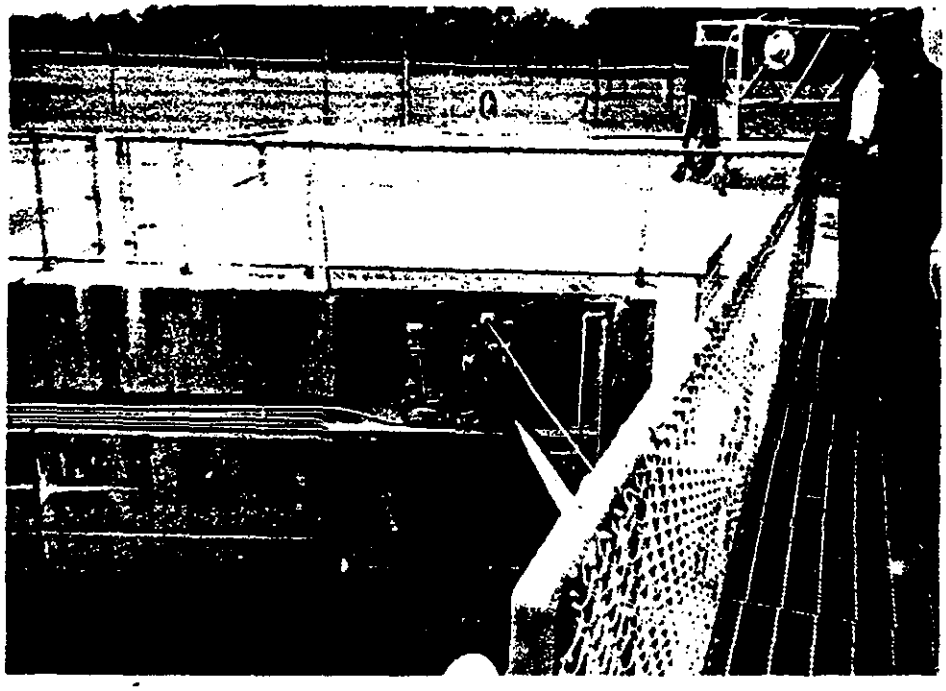
Area of Concern:

1. Violation of RCRA

2. Soil contamination

3. Requires spill contingency plan

4. Housekeeping



Photograph 5

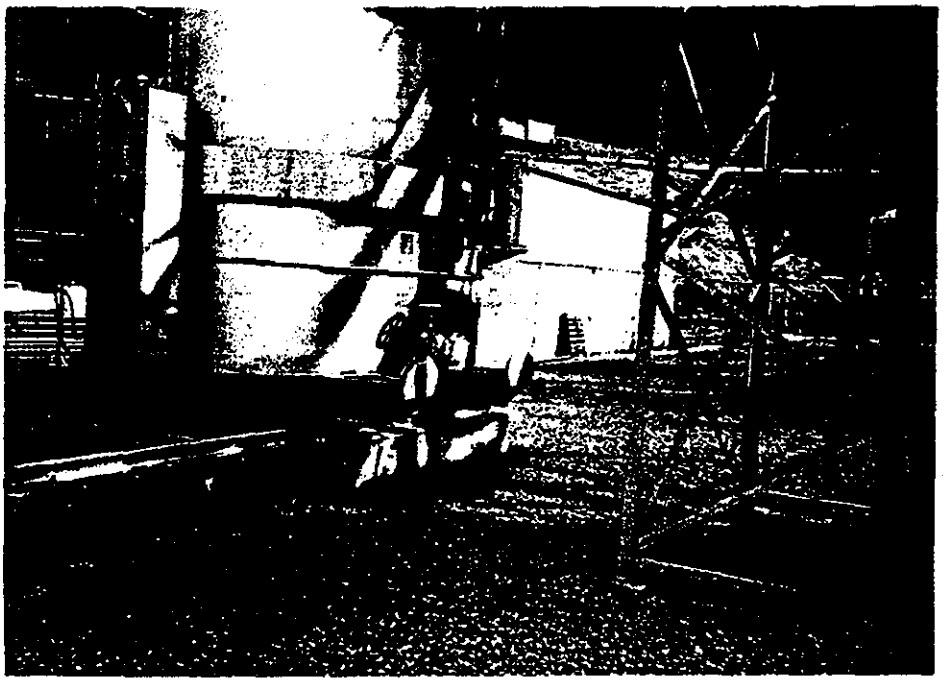
Lock and Dam

Area of Concern:

1. Violation of CWA

2. Spill prevention plan

3. Contamination of project waters



Photograph 6

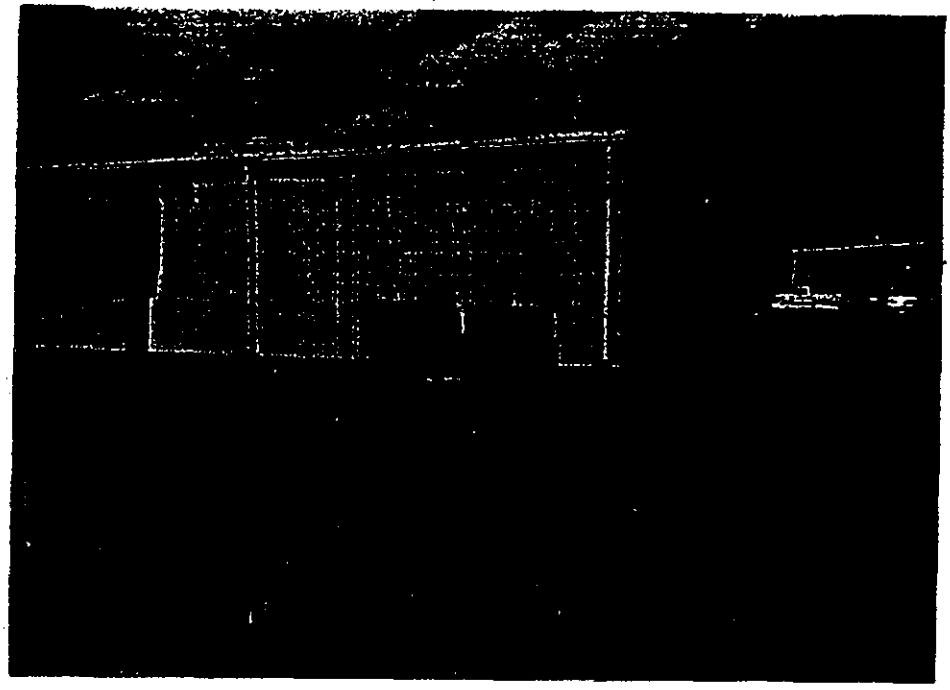
Hydropower Plant Transformers

Area of Concern:

1. Violation of CWA and CERCLA

2. Soil contamination

3. Discharge of Hazardous materials (possible PCB)



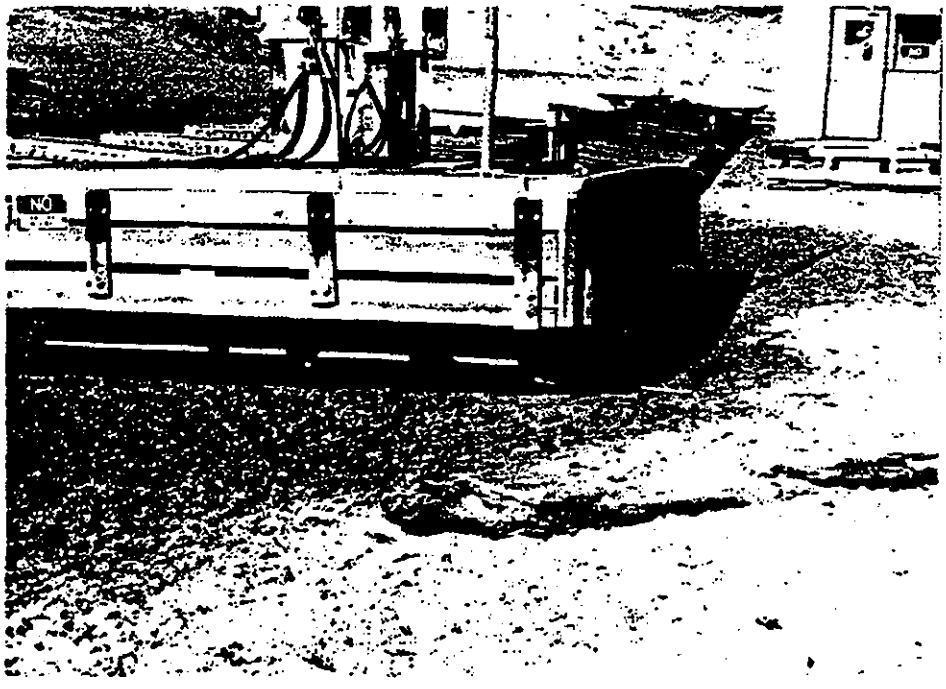
Photograph 7

Diesel Oil Storage Tanks

Area of Concern:

1. Soil contamination

2. Location of storm drain requires spill contingency plan



Photograph 8

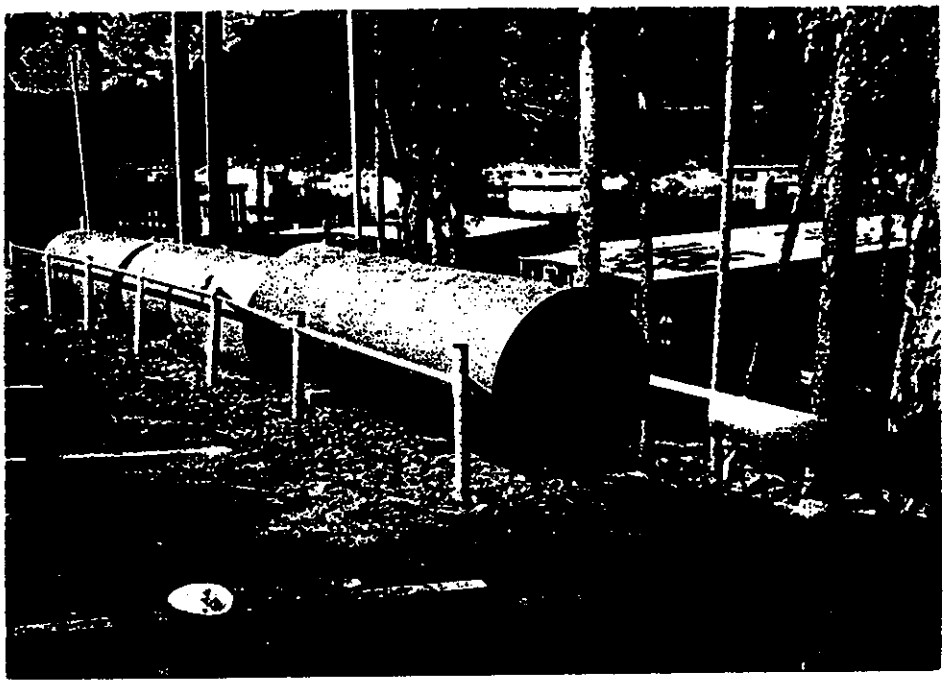
Gasoline Dispensers in a Marina.

Area of Concern:

1. Violation of CWA

2. Contamination of project waters

3. Lack of environmental compliance/enforcement on real estate lease



Photograph 9

Fuel Storage Area in Marina.

Area of Concern:

1. Violation of CWA

2. Requires spill contingency plan

3. Lack of environmental compliance/enforcement on real estate lease

Photograph 10

Dispensing Area

Area of Concern:

1. Soil contamination

2. Spill contingency plan

3. Housekeeping

Photograph 11

Solid Waste Disposal site

Area of Concern:

1. Violation of solid waste disposal regulations

2. Creosote timbers: Violation of CERCLA

3. Potential NPL site

Photograph 12

Used Drums & **Metal Storage Area**

Area of Concern:

1. Violation of RCRA and solid waste regulations

2. Soil contamination

3. Improper storage of HTW

4. Lease enforcement

Photograph 13

Storage/Wash and Fuel Transfer Site

Area of Concern:

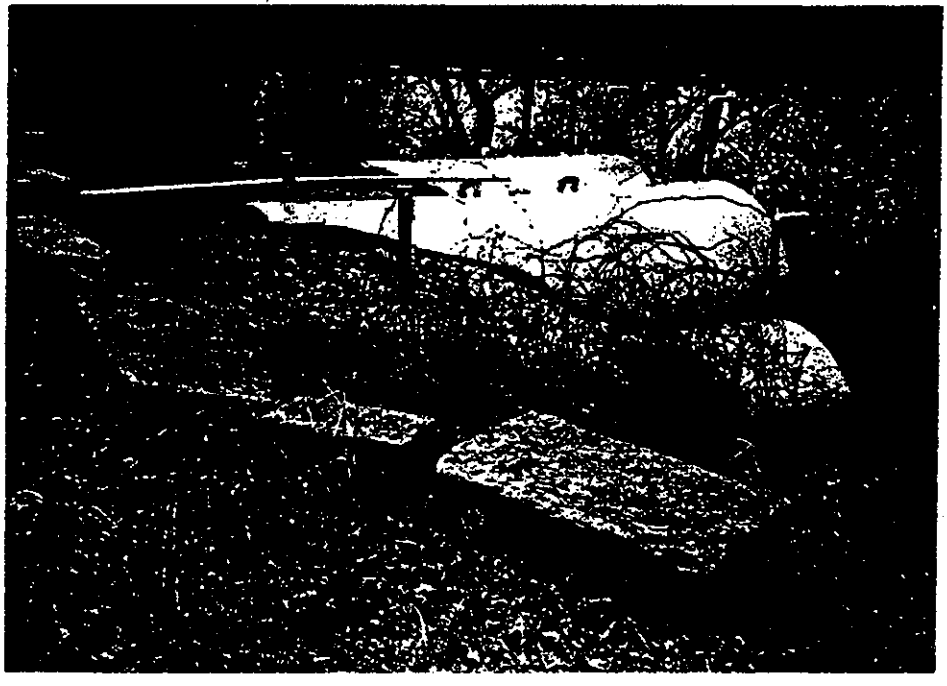
1. Violation of RCRA and CERCLA

2. Soil contamination

3. Requires spill contingency plan

4. Improper storage of hazardous materials

5. Housekeeping



Photograph 14

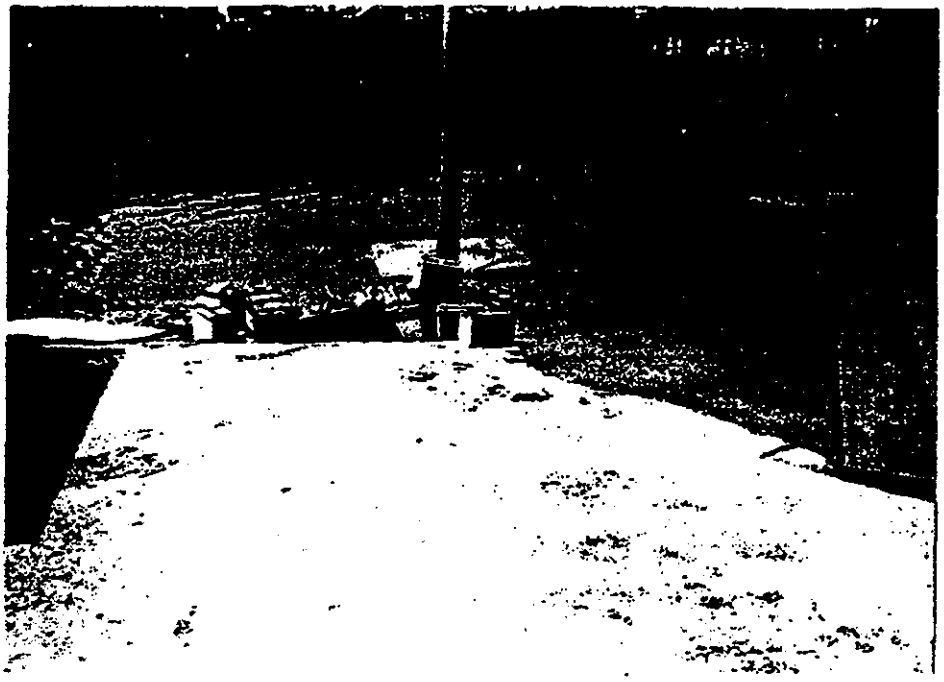
Fuel Storage Area

Areas of Concern:

1. Violation of RCRA and CWA

2. Requires spill contingency plan

3. Underground fuel storage tank requirements



Photograph 15

Batteries Storage Area

Area of concern:

1. Violation of CWA, CERCLA

2. Contamination of Project Waters

3. Lease enforcement

Photograph 16

Contractor's Storage Tank

Area of Concern:

1. Violation of CWA

2. Soil contamination

3. Enforcement of Contract Requirements for Environmental Compliance.

4. Spill contingency plan

Photograph 17

Oil Rights Outgrant

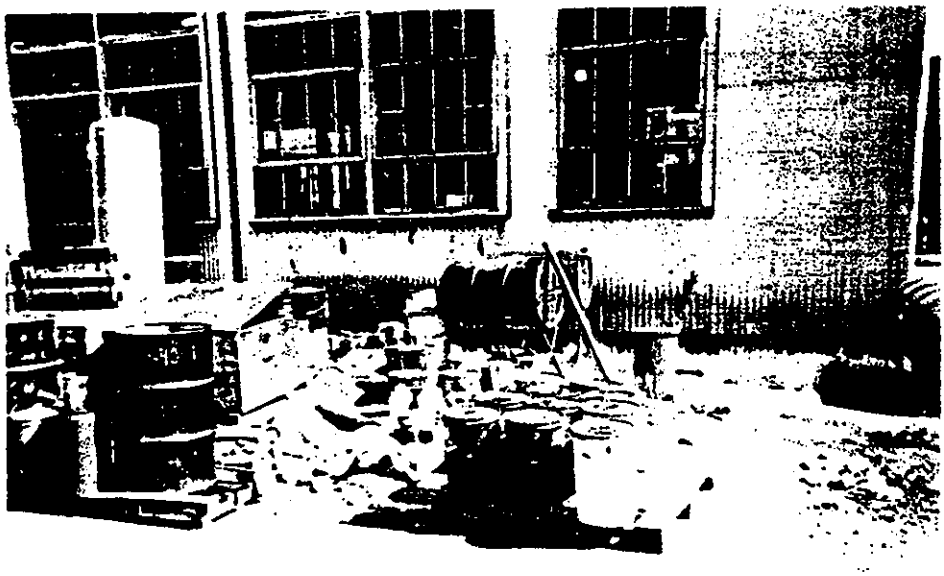
Area of Concern:

1. Violation of RCRA, CWA

2. Soil Contamination

3. Lease enforcement

4. Spill contingency plan



Photograph 18

Oil, Paint Storage Area

Area of Concern:

1. Violation of RCRA

2. Improper storage of HTW

3. Soil contamination

4. Housekeeping

5. Spill contingency plan

Photograph 19

Paint, Oil Storage Area

Area of Concern:

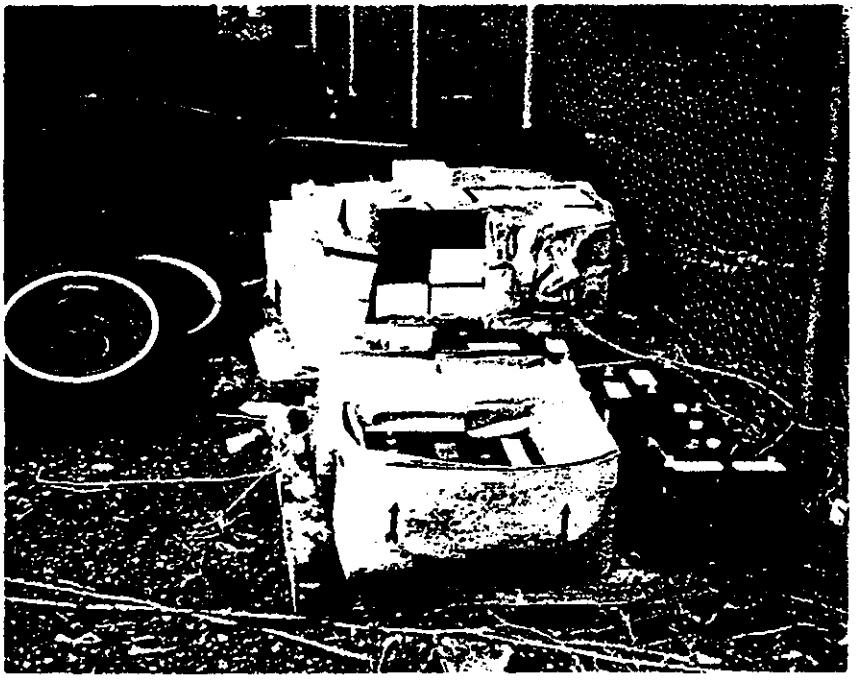
1. Violation of RCRA, CERCLA

2. Soil contamination

3. Improper storage/disposal of HTW

4. Housekeeping

5. Spill contingency plan



Photograph 20

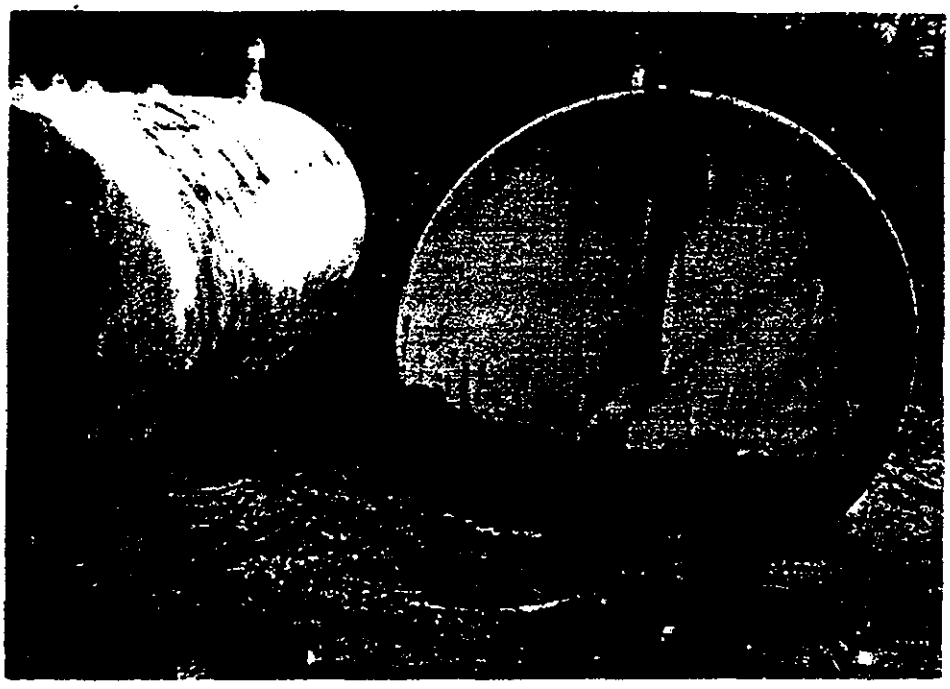
Batteries Storage Area

Area of Concern:

1. Violation of RCRA, CERCLA

2. Improper storage/disposal of HTW

3. Spill contingency plan



Photograph 21

Fuel Tanks

Area of Concern:

1. Violation of RCRA

2. Spill contingency

Photograph 22

Contractor's Fuel Dispensing Area

Area of Concern:

1. Soil contamination

2. Poor housekeeping

3. Spill contingency plan

Appendix C

ENVIRONMENTAL COMPLIANCE

ABBREVIATION LIST

CAA	-	Clean Air Act
CFR	-	Code of Federal Regulations
CO	-	Carbon Monoxide
CWA	-	Clean Water Act
DoD	-	Department of Defense
ECC	-	Environmental Compliance Coordinator
EPA	-	Environmental Protection Agency
ECAS	-	Environmental Compliance Assessment System
ERGO	-	Environmental Review Guide for Operations
FIFRA	-	Federal Insecticide, Fungicide, and Rodenticide Act
FWS	-	U.S. Fish and Wildlife Service
MP	-	Management Practice
MSDS	-	Material Safety Data Sheet
NAAQS	-	National Ambient Air Quality Standards
NEPA	-	National Environmental Policy Act
NFPA	-	National Fire Protection Act
NHCar	-	New Hampshire Code of Administrative Regulations
NHPA	-	National Historic Preservation Act
NHRM	-	Natural and Historic Resources Management
NO^{I}	-	Nitrogen Oxides
NPDES	-	National Pollutant Discharge Elimination System
NRM	-	Natural Resources Management
OHSPC	-	Oil and Hazardous Substances Pollution Contingency Plan
OMP	-	Operational Management Plan
PCB's	-	Polychlorinated Biphenyls
pCi/L	-	picoCurie per Liter
PMP	-	Pest Management Plan
POL	-	Petroleum Based Fuel or Lubricant
PPM	-	Parts Per Million
RCRA	-	Resource Conservation and Recovery Act
SARA	-	Superfund Amendments and Reauthorization Act of 1986
SDWA	-	Safe Drinking Water Act
SHPO	-	State Historic Preservation Officer
SPCC	-	Spill Prevention Control and Countermeasures
TCLP	-	Toxic Constituent Leaching Procedure
TSCA	-	Toxic Substances Control Act
TSDF	-	Treatment, Storage, and Disposal Facility
UFO	-	Unidentified Flying Object
USACE	-	U. S. Army Corps of Engineers
UST	-	Underground Storage Tanks
VOC	-	Volatile Organic Compound

Appendix D

PHOTOGRAPH LISTING

Photograph #1 - Hazardous Waste container not labeled.

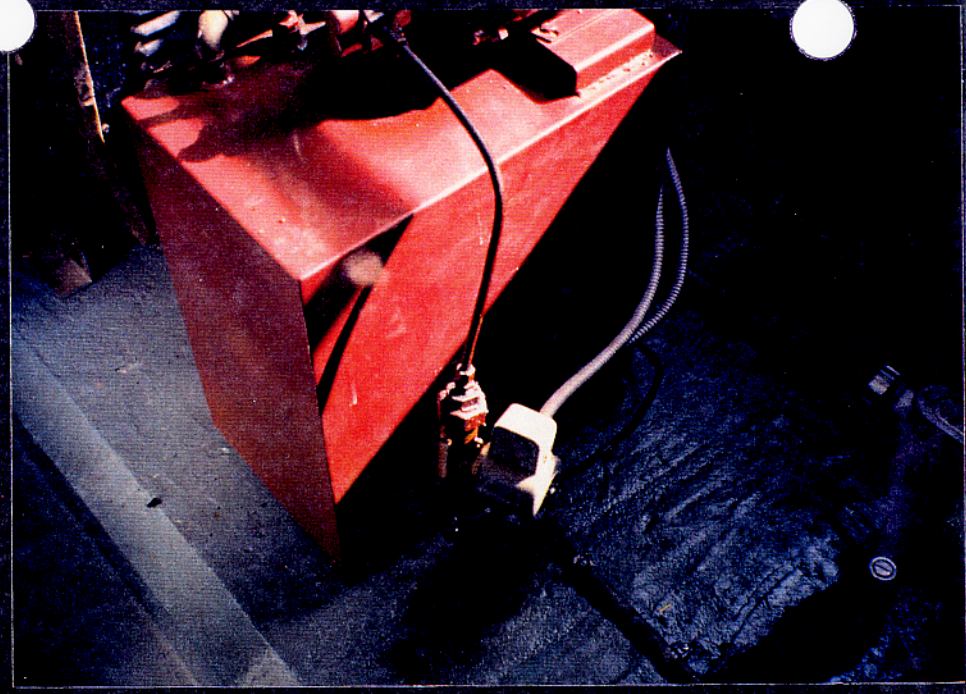
Photograph #2 - Generator day tank lacks secondary containment.

Photograph #3 - Miscellaneous concrete posts stored in a scattered pile behind the maintenance building.

Photographs #4 & 5 - Waste asphalt pile exists in the sandpit area.

Photograph #6 - Three PCB-containing transformers located on project adjacent to Project Office

Photograph #1



Photograph #2

Photograph #4

Photograph #3

Photograph #5

Photograph #6

Appendix E

EDWARD MACDOWELL LAKE

POTENTIAL ERGO PROBLEM SITES

1. WASTE ASHPHALT PILE AT SANDPIT AREA

2. POSSIBLE DUMPING OF USED MOTOR OIL AT SANDPIT DURING CONSTRUCTION OF DAM

3. OLD DUMP PILE BEHIND SAND PIT

4. POSSIBLE DUMPING OF USED MOTOR OIL BEHIND SMALL GARAGE

5. OLD DUMP PILE BEHIND TIN GARAGE

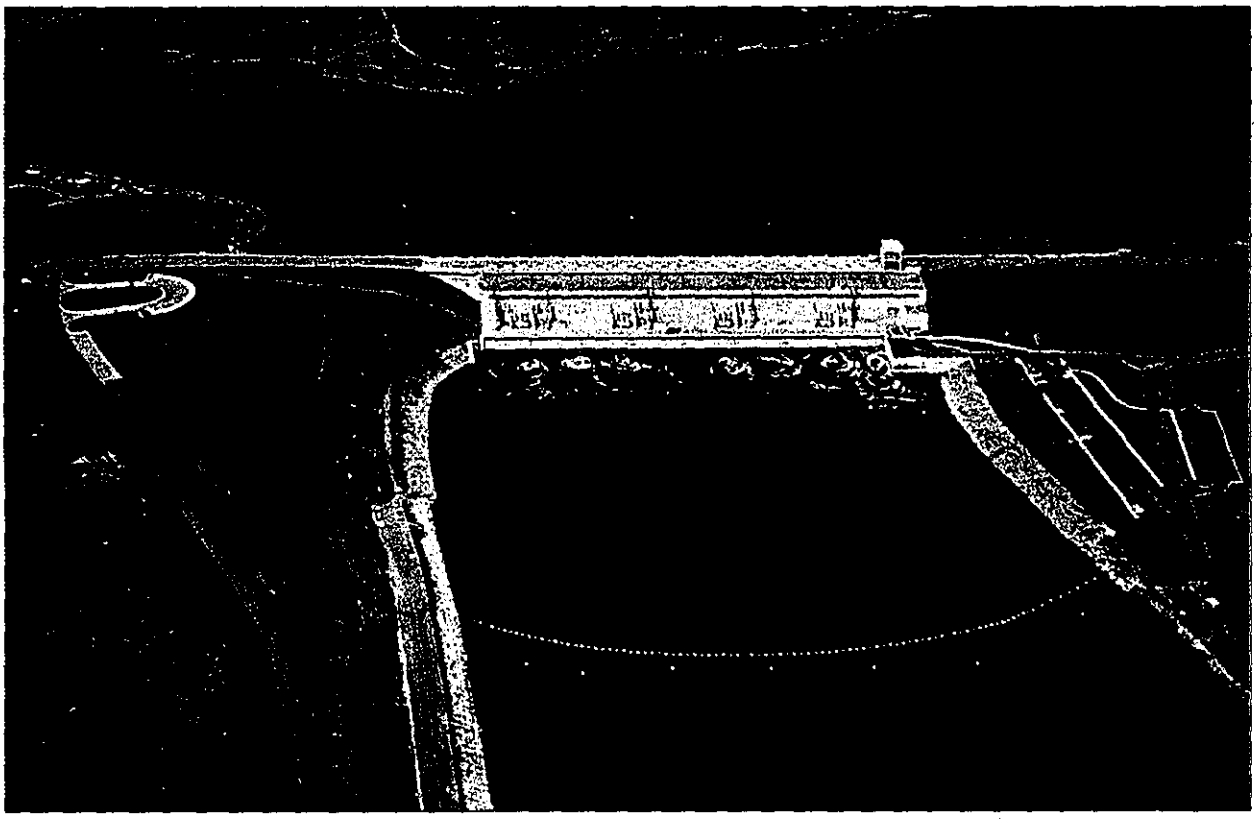
#1562064	2.30	MacDowell, Bottom of Gatehouse
#1561995	2.30	Otter Brook Quarters
#1559268	2.20	Mansfield, Gate House
#1562715	2.20	Union Village Utility Bldg
#1562697	2.10	Ball Mountain Gatehouse
#1559269	2.10	Black Rock, Utility Bldg
#1562720	2.10	East Brimfield, Control Tower
#1559255	2.10	Surry Gatehouse
#1562724	2.10	Westville, Gallery #2
#1562049	2.00	Birch Hill, Old Quarters Basement
#1562048	2.00	Knightville, Lee House 1st Level
#1562676	2.00	Knightville, Utility Bldg
#1562723	2.00	North Hartland Gatehouse
#1562708	2.00	Tully, Gatehouse
#1559265	2.00	Union Village Duplicate Gatehouse
#1562726	1.90	Westville, Duplicate, Control Tower
#1562658	1.80	Hodges, Control Tower
#1562673	1.80	Otter Brook Utility Bldg
#1559288	1.80	Westville, Control Tower
#1561989	1.70	Buffumville Living Quarters Basement
#1561994	1.70	East Brimfield, Quarters Basement
#1562058	1.60	Ball Mountain Quarters Basement
#1562010	1.60	Everett, Bottom of Gate House
#1562023	1.60	Hopkinton, Working level of Gate House
#1559293	1.60	Littleville, Utility Bldg
#1562701	1.60	Union Village Gatehouse
#1562083	1.50	Hop Brook, Control Tower
#1559295	1.50	Littleville, Water Supply Tower #2
#1562076	1.50	MacDowell, Basement of Utility Bldg
#1559290	1.40	Mansfield, Living Quarters
#1562707	1.30	Barre, Gatehouse #1
#1562057	1.30	Blackwater Old Storage Building
#1559277	1.30	Tully, Utility Bldg #2
#1562028	1.20	Barre, Duplicate of Quarters #1
#1562067	1.20	Colebrook, Control Tower
#1562060	1.20	Westville, Utility Bldg
#1562681	1.10	Barre, Quarters #2
#1562670	1.10	Birch Hill, Gatehouse #1
#1562053	1.10	Hopkinton, Basement of Operator's Quarters
#1562699	1.10	Townshend Utility Bldg
#1562713	1.00	Barre, Gatehouse #2
#1562074	1.00	Blackwater Utility Bldg
#1561996	1.00	Hopkinton, Utility Bldg
#1562685	1.00	Littleville, Duplicate Flood Control Tower
#1562687	1.00	Littleville, Flood Control Tower #2
#1562056	1.00	MacDowell, Working Level of Gate House
#1562071	1.00	Thomaston, Utility Bldg
#1562664	0.90	Birch Hill, Gatehouse #2

#1562718	0.90	Buffumville, Living Quarters Duplicate
#1562059	0.90	Colebrook, Utility Bldg
#1559279	0.90	East Brimfield, Quarters
#1561986	0.90	Franklin, Bottom of Gate House
#1559272	0.90	North Hartland Utility Building
#1559274	0.90	North Springfield Gatehouse
#1562704	0.90	Tully, Utility Bldg #1
#1559263	0.80	Buffumville, Living Quarters
#1562659	0.80	East Brimfield, Storage Bldg
#1559282	0.80	Knightville, Gatehouse
#1562662	0.80	Littleville, Water Supply Tower #1
#1562679	0.70	Barre, Quarters #1
#1562719	0.70	Birch Hill, Utility Bldg
#1562073	0.70	Blackwater Working Level of Gatehouse
#1562005	0.70	Hodges, Lower Level of Control Tower
#1562717	0.70	Littleville, Flood Control Tower #1
#1562043	0.70	MacDowell Duplicate Basement of Utility Bld
#1562035	0.70	West Hill Gauge Building
#1562716	0.70	West Thompson, Control Tower #1
#1562017	0.60	Tully, Basin Office #2
#1562678	0.60	West Thompson, Living Quarters
#1562045	0.60	Westville, Storage Bldg #1
#1561999	0.50	Franklin, Working Level of Gate House
#1560412	0.50	Hopkinton, Working Level of Operator's Qrtrs
#1562047	0.50	MacDowell, Basement of Old Operators Qrtrs
#1559267	0.50	Surry Utility Bldg
#1562000	0.40	Cape Cod Canal, Extra
#1562007	0.40	Cape Cod Canal, Extra
#1562039	0.40	Hop Brook, Basin Office 2nd Floor
#1562038	0.40	MacDowell, Working Level of Operator's Qrts
#1562072	0.30	*Field Blank #1
#1561998	0.30	*Field Blank #2
#1562019	0.30	*Field Blank #3
#1562080	0.30	Ball Mountain Quarters
#1562727	0.30	Ball Mountain Utility Bldg
#1562061	0.30	Blackwater New Storage Building
#1559273	0.30	Cape Cod Canal Admin Bldg #1
#1559271	0.30	Cape Cod Canal, Admin Bldg #2
#1562722	0.30	Cape Cod Canal, Duplicate Warehouse
#1559266	0.30	Cape Cod Canal, Garage
#1559256	0.30	Cape Cod Canal, Maintenance Bldg
#1562066	0.30	Hop Brook, Basin Office 1st Floor
#1562037	0.30	Hop Brook, Utility Bldg
#1562014	0.30	Hopkinton Storage Bldg
#1562031	0.30	Hopkinton, Duplicate Working Level Op Qrtrs
#1562068	0.30	Hopkinton, Info Center, Elm Brook Park
#1562002	0.30	Hopkinton, Restroom, Elm Brook Park
#1562075	0.30	MacDowell, Storage Building

#1562042	0.30	MacDowell, Working Level of Utility Bldg
#1562714	0.30	North Springfield Gatehouse Duplicate
#1562033	0.30	North Springfield Quarters
#1561990	0.30	North Springfield Quarters Basement
#1559250	0.30	North Springfield Utility Bldg
#1562012	0.30	Stamford Operating Floor, East
#1562065	0.30	Stamford Operating Floor, West
#1559275	0.30	Stamford, E. Branch Pump Station #1
#1562660	0.30	Tully, Storage Bldg
#1562003	0.30	Waltham Office
#1562700	0.30	Westville, Storage Bldg #2

Introduction to the

Environmental Review Guide for Operations (ERGO)



Introduction

The U.S. Army Corps of Engineers acknowledges its responsibility to comply with environmental laws and regulations, and recognizes that an environmental ethic includes compliance as an integral part of doing business. The Corps intends to be a pro-active leader in focusing on environmental compliance at its diverse projects and facilities. Locks, dams, dredges, campgrounds and all property and facilities under lease or license, such as marinas, oil and gas well drilling facilities, and grazing lands must all be managed to be compatible with the environment. Corps and non-Corps managers of facilities and activities on Corps-administered lands need help understanding and complying with complex and changing environmental requirements. They need a comprehensive program to achieve, maintain, and monitor compliance with environmental laws and regulations, and to implement good management practices. The Environmental Review Guide for Operations (ERGO) is the foundation of that program.

ERGO assessments, conducted on a regular basis, provide managers a picture of compliance levels and corrective action requirements. They are a pro-active approach to assuring that potential environmental protection and compliance issues are identified promptly. Once identified, the full range of specialties within the Corps can be called on to assist in their resolution.

Managing Corps projects and facilities includes accepting liability for compliance with environmental regulations. The purpose of ERGO assessments is to discover and correct noncompliance. The Environmental Protection Agency and other Federal and state agencies are charged with enforcing environmental regulations. An effective ERGO assessment program will help reduce risks—and liability.

Lock and dam operators; county, state or Corps park managers; marina operators; concessioners; or any other operators of facilities on Corps-administered lands, can take a pro-active approach to environmental protection and legal compliance with the ERGO program.

ERGO History

ERGO began with the creation of a steering committee of project, district, and division personnel. A series of working meetings were held to develop a manual to help managers achieve, maintain, and monitor compliance with environmental regulations. ERGO, when augmented by state and local regulations, is a tool for managers to ensure their facilities and projects are in compliance with all environmental regulations. Some deficiencies in compliance with environmental regulations result from misunderstanding the requirements; others result from lack of awareness of recent changes in environmental regulations. When the ERGO manual is used effectively, environmental issues can be identified and resolved early. The core of the ERGO program is an evaluation that results in a comprehensive compliance "snapshot" identifying an environmental program's strengths, weaknesses, and specific problems. With this information, a manager can effectively run a program to achieve and maintain compliance with the complex and growing body of environmental regulations.

Objectives

An ERGO evaluation will:

- Enhance Corps of Engineers' environmental compliance at Federal, state, and local levels
- Improve Corps of Engineers' environmental management
- Build supporting budget requirements
- Assure supervisors their environmental programs will be implemented effectively according to Corps' goals and objectives.

Periodic environmental compliance evaluations are necessary. The evaluations are designed to assess environmental compliance and to give necessary feedback so supervisors can organize, direct, and control environmental compliance and protection activities.

Corps of Engineers personnel at every level are responsible for implementing the ERGO program. Key players come from a wide range of specialties.

Their expertise in specific areas provides the framework for a comprehensive environmental program. A multidisciplinary approach is essential to resolving environmental issues because most activities that affect the environment must be assessed from various perspectives to achieve the most effective environmental management.

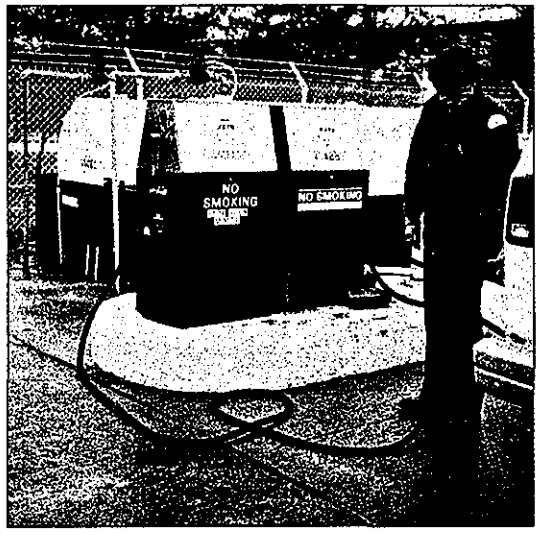
The Evaluation Process

The ERGO Manual is divided into 13 categories, called protocols. A comprehensive evaluation will provide a clearer picture of the overall environmental compliance status of a project or facility. This assessment can be expanded to encompass entire districts. ERGO reviews may be conducted by project or facility staff, project/district teams, Corps/state environmental agency teams, contractors, etc. A thorough evaluation will identify various deficiencies and areas that need attention. A closer look should be taken if no deficiencies are noted. The size and complexity of most Corps projects practically guarantee that they will not achieve continuous 100 percent compliance with the multitude of Federal, state, and local environmental regulations. During the evaluation, deficiencies that can be corrected quickly and easily should be taken care of promptly and documented for historical reference. Tracking relatively minor deficiencies over a period of time may help to identify root causes, such as inadequate training. Long-term deficiencies must be more closely examined. Alternative solutions must be considered before corrective action can be taken. It is imperative to pursue all unresolved issues to ensure their correction.

The ERGO Manual

The ERGO manual is the primary tool for conducting environmental assessments at Corps projects and facilities. The manual compiles applicable Federal regulations, combines them with good management practices and risk management issues, and consolidates this information into checklists. A checklist is provided for each of the ERGO manual's 13 environmental categories. These 13 categories are listed on the following pages.

Air Emissions Management



The Air Emissions section covers major sources of air pollution emissions at facilities, including:

- Storage, dispensing, and transfer of certain fuels and chemicals
- Degreasing and other solvent processes
- Fuel burning at steam and hot water generating plants and boilers
- Open burning.

Cultural/Historic Resources Management

The Cultural/Historic Resources Management section pertains to plans and programs for protection and management of:

- *Prehistoric archeological sites*
- Historic archeological sites
- Historic structures
- Historic districts
- Native religious sites
- Culturally significant structures and sites
- Museum collections.

Hazardous Materials Management

The Hazardous Materials Management section covers the management of chemicals that have hazardous properties, including:

- Flammable/combustible materials
- Acids
- Compressed gases.

Hazardous Waste Management

The Hazardous Waste Management section applies to facilities that generate, store, treat, or dispose of any type of hazardous waste. All waste generated must be analyzed for hazardous characteristics and then, based on analytical results, properly treated, stored, and disposed of. Because hazardous waste regulations are rapidly expanding at all levels of government, this is a large section of the ERGO Manual.

Natural Resources Management

The Natural Resources Management section pertains to plans and programs to protect and manage:

- Land
- Forests and rangeland
- Endangered species
- Fish and wildlife habitat
- Wetlands.

Pesticide Management

The Pesticide Management section covers the use, storage, handling, and disposal of pesticides, which is an inclusive term for herbicides and insecticides.

POL Management

The Petroleum, Oil, Lubricant (POL) section applies to facilities that store, transport, dispose of, or use petroleum-based fuels or lubricants.

Solid Waste Management

The Solid Waste Management section addresses the collection, storage, recycling, and storage of nonhazardous trash, rubbish, garbage, bulky wastes, and containerized liquids and sludges.

Special Pollutants Management

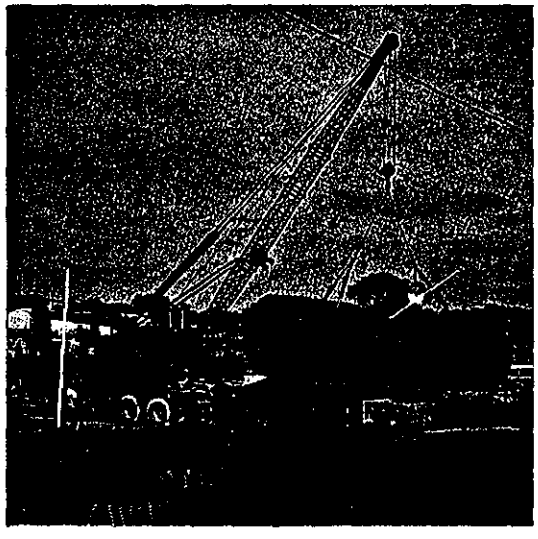
The Special Pollutants section addresses various other programs and will be modified over time as old issues are resolved and new issues arise. This section currently includes:

- Asbestos
- Noise management
- Polychlorinated biphenyls (PCBs)
- Radon.

Underground Storage Tanks Management

The Storage Tanks section addresses underground storage tanks (USTs) used to store hazardous materials or petroleum products and includes:

- Installation of new systems
- Maintenance of existing systems of tanks and piping
- Repair, replacement, or permanent removal of USTs.



Wastewater Management

The Wastewater section addresses regulations, responsibilities, and compliance requirements associated with wastewater discharge and can include:

- Sanitary or industrial wastewater discharged to a receiving stream directly or through a Corps treatment facility
- Sanitary or industrial wastewater discharged to a public-owned treatment plant or other non-Corps facility
- Stormwater runoff from operation areas of the facility to a receiving stream or body of water
- Dredging operations.

Water Quality Management

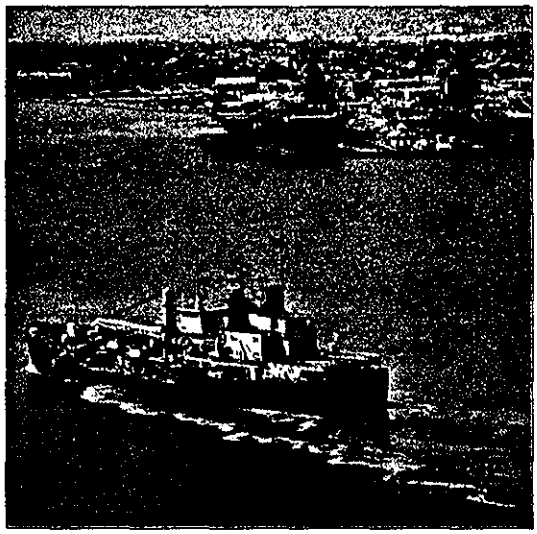
The Water Quality section applies to all drinking and recreational water supplied or managed by the Corps, including:

- Public water supplies under a Corps facility's *jurisdiction*
- Recreational waters management
- Emergency water supplies.

Floating Plant Management

The Floating Plant Management section includes issues relating to hazardous waste management, POL management, solid waste management, and wastewater management. Safety and structural issues, and requirements specific only to ocean-going vessels are not addressed in this section. All types of floating plant are covered, for example:

- Mat sinking units
- Dredges
- Tug boats
- Quarter boats
- Survey boats
- Barges
- Debris boats
- Tenders.



Summary

As a steward of the environment and a leader in the environmental field, the Corps of Engineers cannot afford to have a passive environmental program at its own projects and facilities. ERGO is an essential tool for establishing a pro-active environmental program. The information ERGO provides will identify deficiencies and support the correction of environmental problems. Increased environmental awareness promotes environmental compliance, enhances our environmental ethic, and reduces the risk of legal action.

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